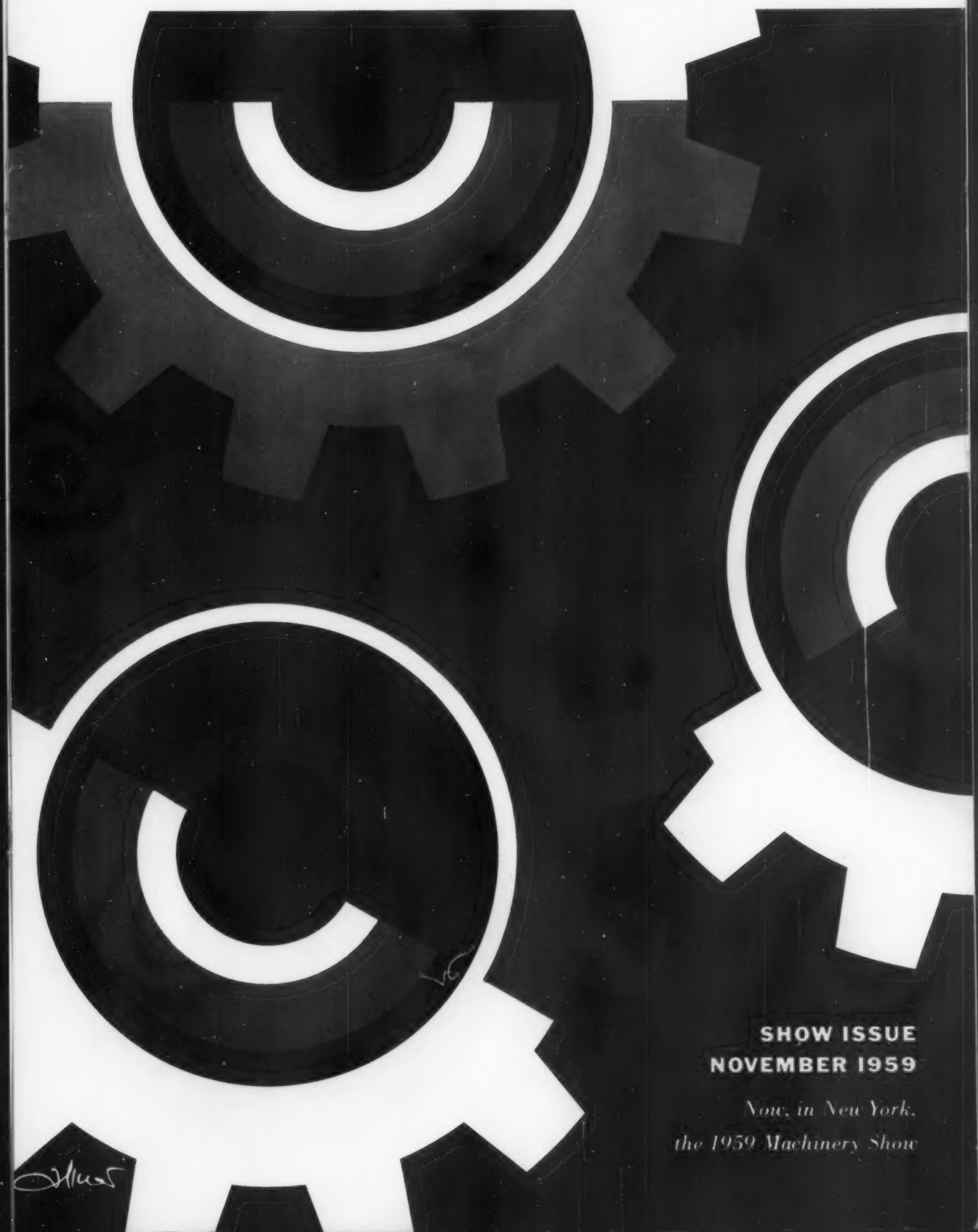
MODERN PACKAGING



SHOW ISSUE
NOVEMBER 1959

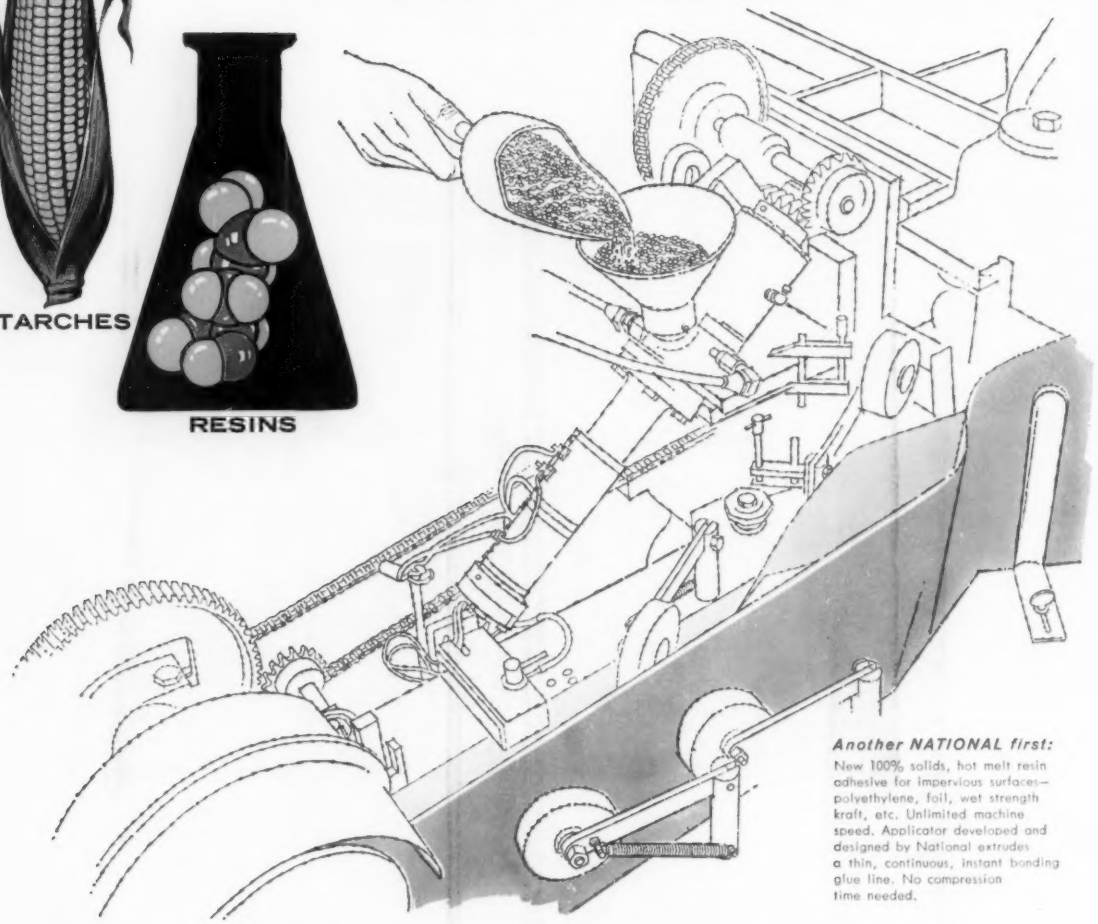
Now, in New York,
the 1959 Machinery Show

"Cross Pollination"

GENETICS + SYNTHETICS + ADVANCED THINKING

STARCHES

RESINS



Another NATIONAL first:
New 100% solids, hot melt resin adhesive for impervious surfaces—polyethylene, foil, wet strength kraft, etc. Unlimited machine speed. Applicator developed and designed by National extrudes a thin, continuous, instant bonding glue line. No compression time needed.

Creates basic advances in Package Making

The genetic "cross pollination" of hybrid corn to produce unique strains . . . and the chemical "cross pollination" of corn starch to produce unique starch derivatives . . . plus "cross pollination" with vinyl acetate polymers and copolymers in emulsion form . . . have given NATIONAL complete flexibility of formulation in creating new and unique starch and resin adhesives for packaging.

That's one great advantage.

An even greater customer advantage is NATIONAL's unmatched technical service. It's based on the "cross pollination" of our advanced thinking in adhesive research and our broad technical field experience.

This unique "cross pollination" of genetics, synthetics and advanced thinking has resulted in a wealth of know-how, not generally possessed by individual packaging companies.

NATIONAL's "cross pollinated" technical service is available for the asking . . . to help build product features that become decided competitive advantages for you.

You'll find our packaging adhesives—everywhere!

See us at PMMI & PI
New York City, Nov. 16-20

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STARCH and CHEMICAL
CORPORATION
750 THIRD AVENUE, NEW YORK 17, N. Y.

Quality Control
PACKAGING

How to PROTECT *your paper profits*

Kimberly Clark's new line of Marvalon drawer and shelf lining and decorative coverings gets dazzling display in VITAFILM. *Marvalon Package by Milprint, Inc.*

Here's a powerful new asset that can be added to the merchandising of paper products. It's VITAFILM — Goodyear's unique, tough, crystal-clear package wrap.

VITAFILM is lustrous — gives an added sparkle to whatever it encloses. Colors and patterns — in shelf paper, greeting cards, stationery, plates, cups and the like — are highlighted.

And this eye-appealing fresh look *lasts* — no matter how long the goods are on display. VITAFILM is no magnet for dust!

VITAFILM has, in addition to beautiful clarity, the ability actually to transmit the "feel" and texture of the product.

But that's only half the job VITAFILM can do for you. The *protection* it affords is unequaled.

Under the roughest handling by shoppers, VITAFILM will not split or run. Its seals, made under a wide temperature range, are heat-welded to be completely strip-proof, are even stronger than the film itself. That's the end of broken-package troubles, spilled contents, unsalable goods!

Because VITAFILM seals quickly and permanently over a wide range of temperatures, it operates smoothly and efficiently on automatic machinery.

If your interest is paper products — or textiles, hardware, pharmaceuticals, foods — you'd best get the VITAFILM story *now* from the Goodyear Packaging Engineer. No obligation, of course. Just write: Goodyear, Packaging Films Dept. K-6418, Akron 16, Ohio.

Vitafilm by GOODYEAR

The best thing between you and your customer

Vitafilm, a Polyvinyl chloride—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

NOVEMBER 1959 VOL. 33 NO. 3

IN THIS ISSUE

123 **Resurgence in machinery**
A surge of new developments in automatic machinery is sweeping the packaging field. It has been spurred by the emergence of versatile plastics, by rising labor costs and by constant demands for more speed. In this new wave of activity, three trends are evident: new concepts in equipment to handle plastics, integrated higher-speed machinery and a few relatively slow but versatile units for special jobs. This MODERN PACKAGING report is drawn largely from prototype equipment now under construction.
General interest.

130 **The girdle hurdle**
Research helps Glamorize Foundations develop a girdle box acceptable to "upstairs" department-store personnel who scorn self-help packaging that sells cheaper wares. All selling data are printed inside the cover of the "brandless" box. Because the hinged cover stays permanently with the box, there is no confusion of size information such as could be caused by two-piece boxes.
Special interest: soft goods, toiletries, cosmetics.

132 **83% lighter in plastic**
A significant step toward adoption of polyethylene containers solely for their utility is taken by Breck. The company uses a thin-wall plastic gallon bottle, supported by a corrugated carrier and dispensing carton, for shipping liquid shampoo to hairdressers. The space-saving rectangular container saves $20,000 a year in shipping costs.
Special interest: beverages, toiletries, chemicals.

FRONT FEATURES

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"A big month brings the 13th issue."

134 **The Food & Drug crisis: How now?**
Now fully aware of the implications of the new Food Additives Amendment, the packaging field has begun a program of concerted action as packagers and suppliers take steps to comply with the new law. Progress is slow, but there's hope for the future. Here is an up-to-date report on the situation.
Special interest: foods, drugs.

139 **Capturing the qualities of mops**
O-Cedar adapts packaging ideas from other fields to sell two types of mop. For a dust mop, rigid polystyrene tray and lid offer protection, visibility and product demonstration. For a water-soaked sponge mop, soft polyethylene bag dramatizes the product's property of permanent flexibility.
Special interest: housewares, soft goods, foods, drugs, toiletries, soaps, paper goods.

140 **Off-the-shoulder label**

The machinery problem of applying a paper label diagonally around a vase-shaped bottle at high speed would seem to be a difficult one. But Pacquin solves the problem by adding an ordinary paint brush and a "floor" brush to a standard spot-labeling machine. It suggests new possibilities in handling angled labels for unusual design effects.
Special interest: all glass packagers.

146 **Step-up in strip packaging**
Warner-Chilcott achieves a major advance in strip packaging of tablets via a new rotary machine that adapts mechanical elements from packaging techniques in other product fields. The machinery modification assures gentle handling of fragile antacid tablets, boosts packaging speeds 200% over the former output. The increased strip-packaging speed, plus use of a hard-to-handle carton, necessitated a coordinated group of automatic cartoning, wrapping and bundling machines to complete the line.
Special interest: drugs, toiletries, all small parts.

149 **Sealer for random-size cases**
Installation of a new case gluer and sealer which adjusts itself automatically to a wide range of different-sized shipping containers fed in random order results in big benefits to GE. They are: a 60%

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OF MODERN PACKAGING®

cut in packaging labor costs, a 75% saving in floor space and a reduction in material costs.
General interest.

158 **Packaging comes to the Modern Museum**

For the first time in its history, New York's famed institution for contemporary art devotes an exhibit exclusively to packaging. Some 200 packages, representing 10 countries, will be on display until Nov. 9. Purpose of the exhibit: to inspire designers to greater achievement.
General interest.

163 **Art for liquor's sake**
Unbridled imagination is the hallmark of the liquor industry's annual gift-packaging competition. A standout example is Schenley's 1959 entry: reproductions of world-famed paintings rolled around paperboard tubes containing the bottles.
Special interest: wines, liquors, all gift packaging.

164 **Now, the 3rd Machinery Show**
Beginning a biennial schedule, the PMMI Show comes to the New York Coliseum Nov. 17-20. Its 155 exhibits comprise a one-stop shopping center for machinery designed to boost the efficiency of almost any packaging line. At the concurrent (Nov. 16-18) Packaging Institute Forum, there is an opportunity for busy packagers to pick up valuable new ideas. Inside our front cover: a pocket-size guide.
General interest.

166 **Europe shows its finest**
Two overseas events give promise of fresh ideas for American packagers. Machinery improvements abound at Britain's sixth Packaging Show; new Eurostars emphasize protection in packaging.
General interest.

172 **is for Abbott**
Under the aegis of a 15-man packaging committee, this pharmaceutical firm has launched a corporate-identity program involving more than 550 packages. All containers eventually will boast new colors and a distinctive lower-case "a" trademark. Significantly, the program sets up a flexible, but well-defined framework for future new-product packaging.
General interest.

TECHNICAL & ENGINEERING

179 **A meter for film clarity**
Olin Mathieson researchers develop a clarity meter that is reported to be superior to conventional straight-line instruments in evaluating the visibility of overwrap films. It uses a mirror to pass a beam of light twice through the film at an angle. *By P. M. Hay, C. P. Evans and K. W. Ninneman.*

183 **Medium-density PE in coatings**
Intermediate-density polyethylenes are found to perform better than low-density resins at the same coating weight. Excellent greaseproofness, WVTR and abrasion resistance are attained on standard equipment without sacrificing extrusion behavior. Where WVTR is of importance, coating weight may be reduced, at a substantial saving in cost.
By Charles S. Imig and John F. Morris.

187 **Machinability of polypropylene film**
Exhaustive tests show that this new thermoplastic film—whose properties include toughness, clarity and sparkle—can be run at high speed on overwrapping machinery. All signs point to a rosy packaging future for the film. *By Ralph M. Winters.*

190 **Questions & Answers**
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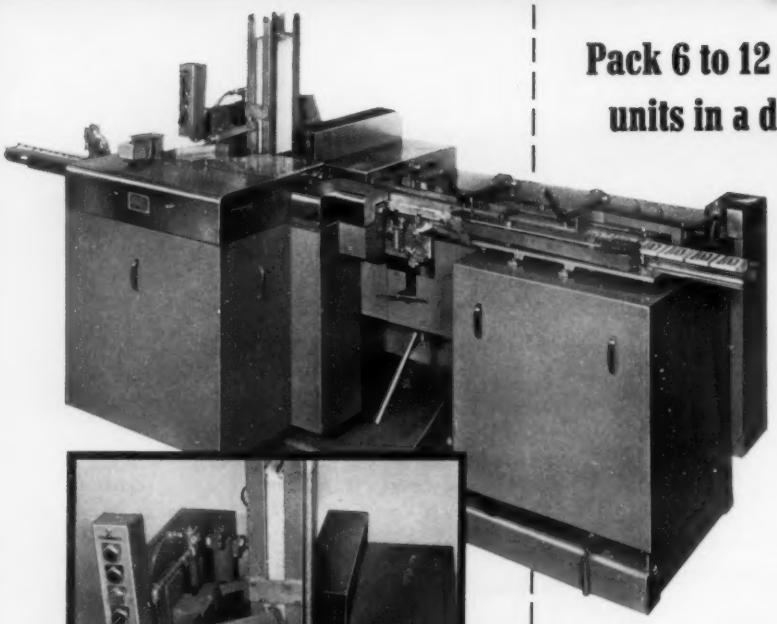
Modern Packaging issued monthly by Modern Packaging Corp. at Emmett St., Bristol, Conn. Modern Packaging Encyclopedia Issue published as second issue in November by Packaging Catalog Corp. at Emmett St., Bristol, Conn. Second-class postage paid at Bristol, Conn. Subscription rates (including Modern Packaging Encyclopedia Issue), payable in U. S. currency: In U. S., its possessions and Canada, 1 year $7, 2 years $12, 3 years $17; all other countries, 1 year $25, 2 years $45, 3 years $60. Single copies in U. S., its possessions and Canada, 75 cents each (Show Issue, $1; Encyclopedia Issue, $3); all other countries, $2.50 (Show Issue, $3; Encyclopedia Issue, $6).

Pack 6 to 12 or more individually packaged units in a display carton, *AUTOMATICALLY* with the efficient REDINGTON MULTIPACKER



Fast, efficient package production with a minimum of labor cost—that is what you get with the REDINGTON *"Multipacker,"* if you group-package individually cartoned units in a counter or shelf display carton.

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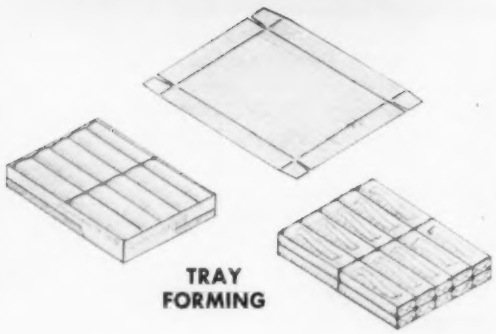
When a carton or sleeve is used for the group package, the *"Multipacker"* feeds one from the magazine where it is flat-stacked, forms and fills it with the group of individual units, and closes the carton by glue-sealing or tucking the end flaps.

If the group container involves a tray, the die cut blank feeds from the magazine stack into a form, which turns up the sides. After the machine fills the tray with the individual unit assembly, it turns up the tray ends and glues them to the side flaps.

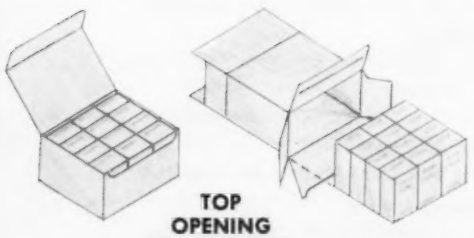
REDINGTON *"Multipackers"* also easily handle preformed trays. *"Multipackers"* will load up to 400 individual units into 10 to 60 or more multipack containers per minute.



TRAY FORMING

The *"Multipacker"* has great flexibility as to sizes of products and containers. Changes can be made without protracted down-time periods to eat into volume and add to costs. When machine handles folding cartons of the end-opening variety (which permits faster filling), a unique REDINGTON feature—slitting the long glue seam before discharging the filled carton—can be added to permit the carton to be top-opened by the storekeeper for product display. Another REDINGTON attachment will imprint product designation or other data, which often permits lower carton inventories.

If *you* have a group-packaging job, check with us on how a *"Multipacker"* set-up can improve your production and whittle down your costs. Or if you carton any solid or semi-solid object—tubes, bottles, etc.—either singly or in multiples, REDINGTON'S exceptionally broad line of expertly engineered, sturdily built packaging equipment can give you the profit advantages of a *completely* automatic packaging line. Write us about *your* packaging problem today.



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Dobeckmun printing helps win shelf space and customer demand for Sunniland Nuts. Sunniland sells the whole product story, in words and pictures, visually and readably portrayed in Dobeckmun processed gravure.

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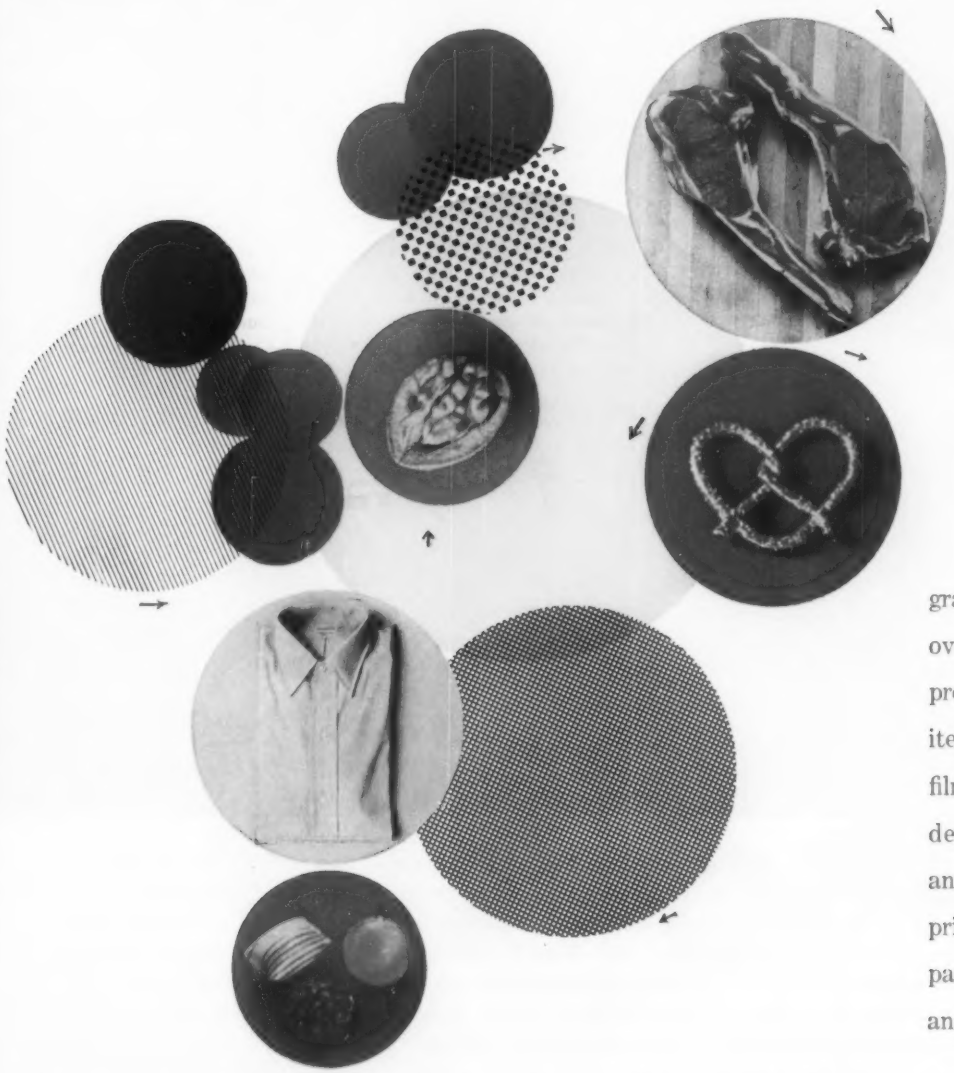
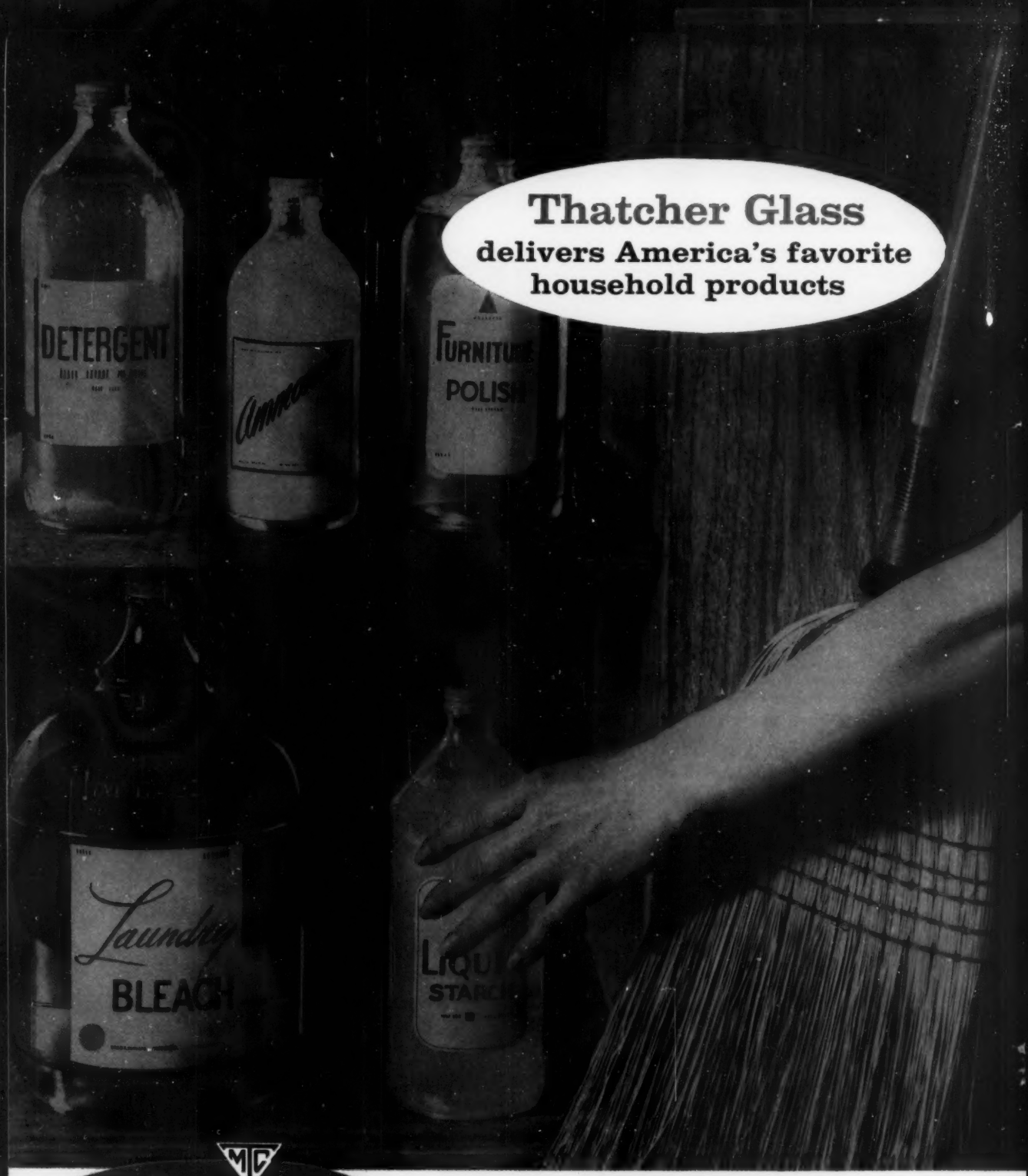


DOBECKMUN'S processed gravure printing speeds up turnover for foods, textiles, paper products and thousands of other items marketed in Dobeckmun films and foils. Arresting design, faithful reproduction and flawless registration, in all printing processes, are part and parcel of packages for performance by Dobeckmun.

The Dobeckmun Company, A Division of The Dow Chemical Company, Cleveland 1, Ohio • Berkeley 10, California. Offices in most principal cities.



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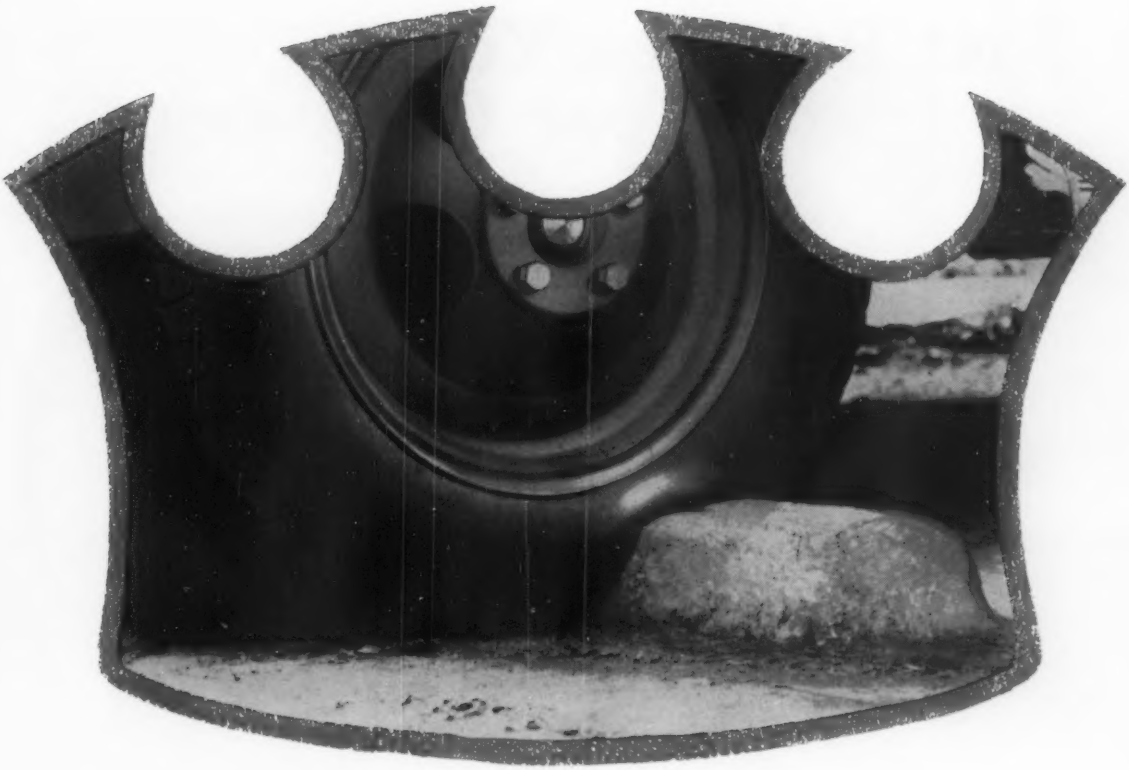

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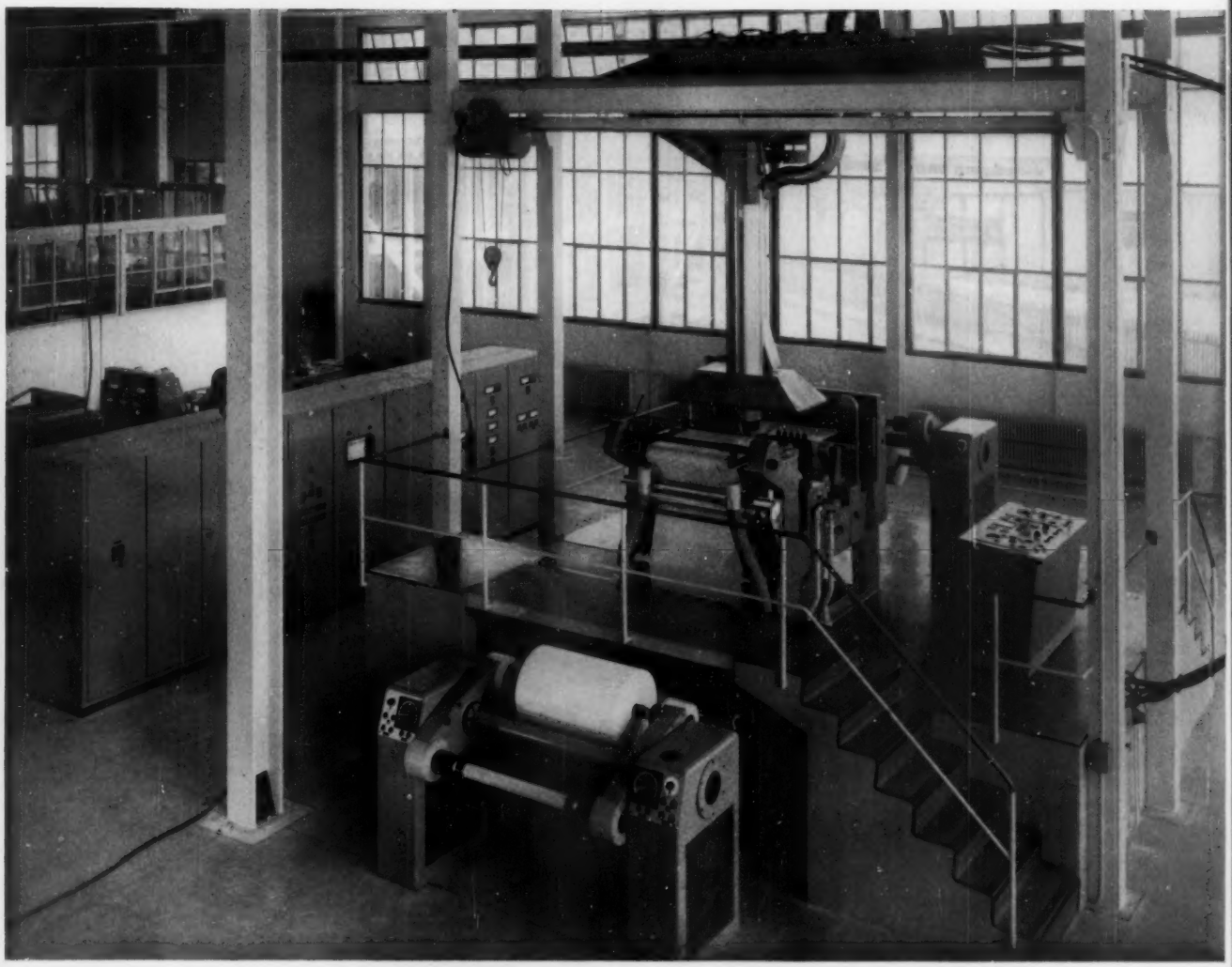

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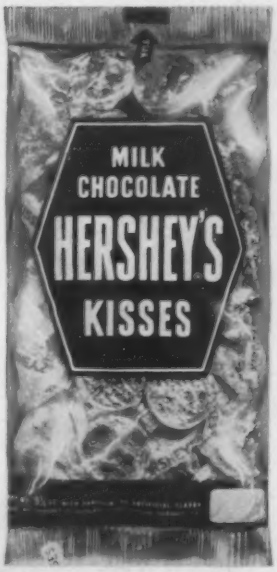

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Hang it up or Stand it up
Your product gets perfect visibility
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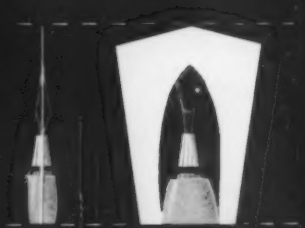
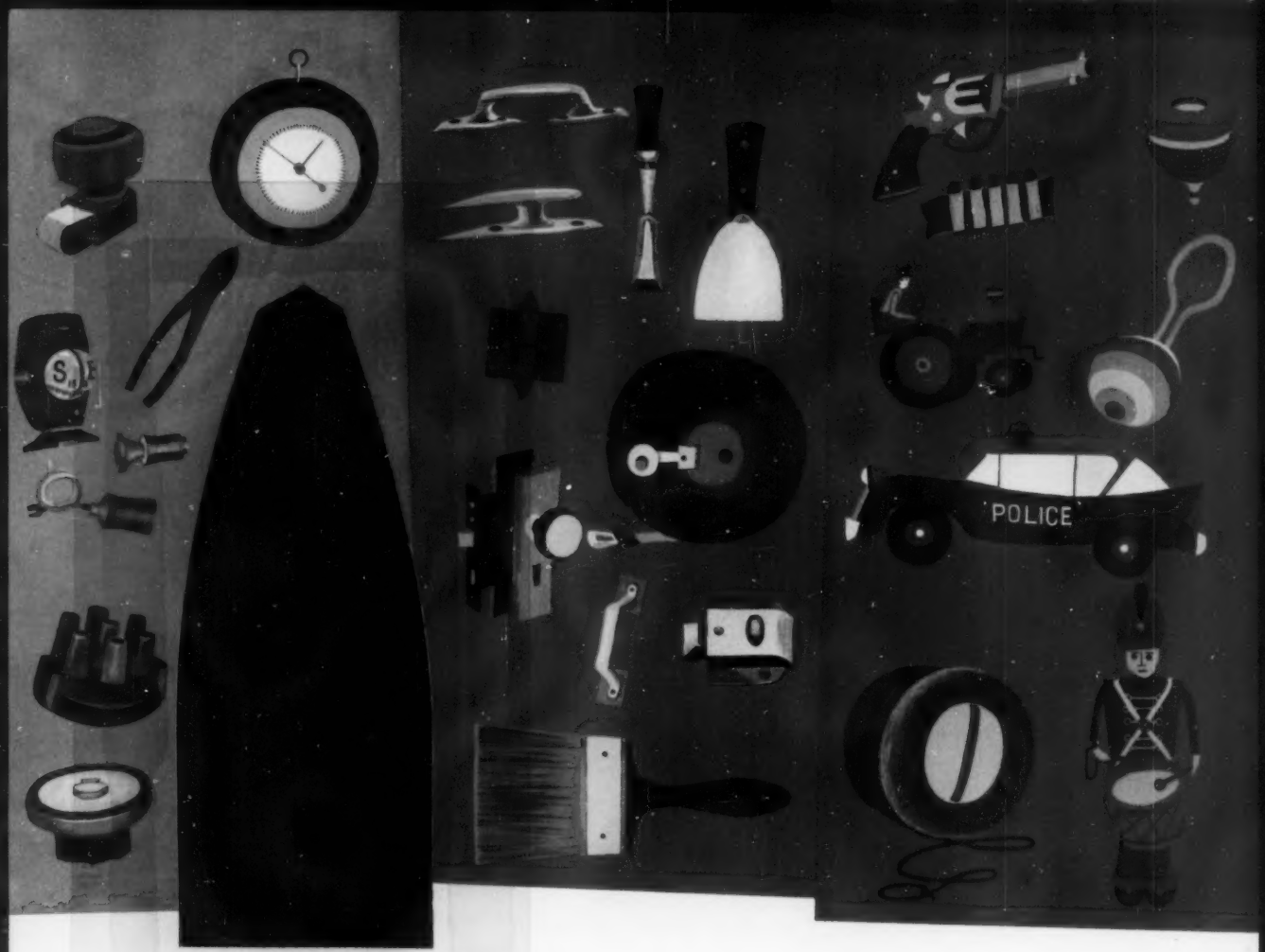
Patented Display Development by
Robert B. Grant, Inc., New York City
U.S. Pat. No. 3,467,424



Side view shows product snugly sealed in film... rear view reveals complete transparency of package

Special Machinery distributed by Inpak Systems, Inc., New York, N. Y.



Revolutionary New Package

Brings Unequaled Economy, Protection, and Eye-Catching Display to Wide Variety of Products

You'll soon be seeing it on lots of counters and display racks—an entirely new kind of package that affords unusual product visibility and protection.

It is Panoramic Vision Packaging in the new Stretch Display Package.

Combining paper board and VITAFILM—Goodyear's clear, tough packaging film—Panoramic Vision Packaging offers so many advantages, it could well revolutionize all thermoform packaging.

Vitafilm

REMARKABLE PRODUCT VISIBILITY

Thanks to unique characteristics of VITAFILM, *your product is firmly held, and can be completely visible on all sides. Or it can be packaged for front and side visibility only.*

OUTSTANDING DISPLAY POSSIBILITIES

This new package can stand by itself on a counter, or hang in a display rack. All sorts of merchandising opportunities are opened up.

LONG SHELF-LIFE

Thanks to strong hermetic seal, products are protected against dust, handling, moisture. VITAFILM *doesn't split, run or deteriorate. Its clarity heightens sales appeal, speeds product turnover.*

ECONOMY IN HANDLING

Can eliminate separators in shipping containers. Long-run savings up to 30%.

EASILY OPENED

VITAFILM is easily slit for removal of contents. No sharp edges to scratch or cut.

If you want your product shown to advantage, better get the facts now on this entirely new concept in packaging.

What can Panoramic Vision Packaging do for you?

by GOODYEAR

TURN THE PAGE AND SEE!

Four ways to cash in on new VITAFILM stretch display packaging

Fast relief with Vaseline
LIP-ICE
Chapped Lip Balm
SELECTED FOR USE BY THE U.S. OLYMPIC TEAM
only 35¢
Soothes . . . Protects Summer & Winter
SEE OTHER SIDE FOR EXCITING OLYMPIC BOOK OFFER

Vitafilm

Goodyear, Packaging Films Dept., Akron 16, Ohio

Gentlemen:

Please give me complete information on Panoramic Vision Stretch Display Packaging.

Name_____

Company_____

Address_____

S-6467

GOODYEAR

Vitafilm, a Polyvinyl chloride —T.M. The Goodyear Tire & Rubber Company, Akron 16, Ohio

Vitafilm PACKAGING

Litho in U.S.A. 9-59

New...and Successful...Package Design

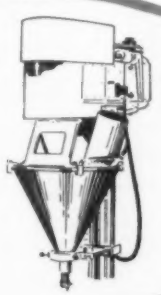
. . . depends strongly upon efficient, capable machinery.

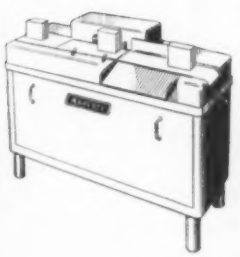
Bartelt has played an important part in the development of packages for many established brand products. Let us analyse your requirements and show you how to meet them economically with fast automatic equipment.

Bartelt Packaging Machinery is custom designed to meet your specific requirements by experienced engineers . . . built to machine tool precision by expert craftsmen . . . of high quality materials for long, dependable service.

BARTELT *"Machinery for Creative Packaging"*

FILLER ACCURATELY DISPENSES . . .
Powders,
Granulars,
Semi-liquids,
Liquids
Pastes



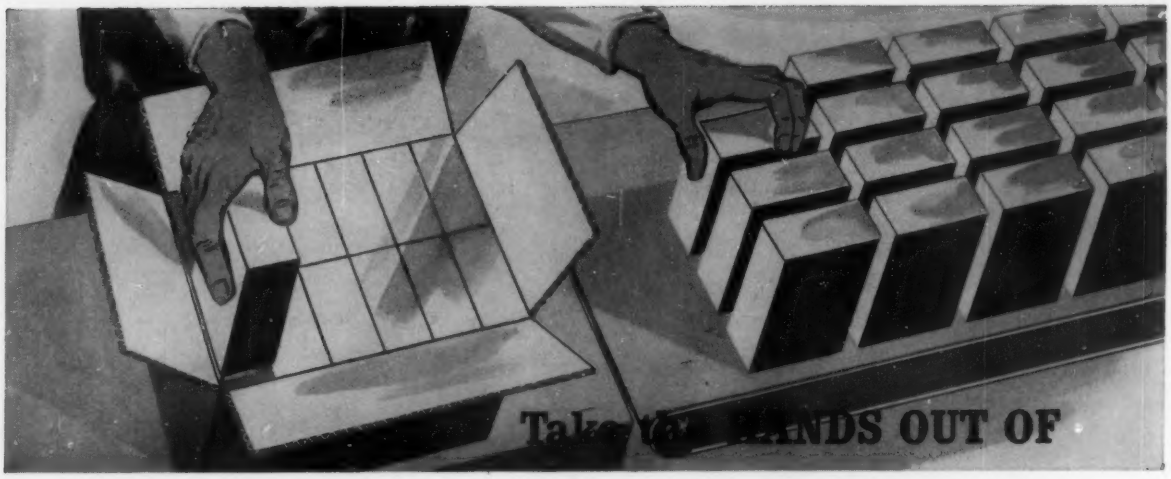


CHECKWEIGHER
Speeds to 200 p.m.
Accuracy to ¼ ounce
Weighs up to 2 lbs.
Most containers, open or closed.
Continuous Motion
Electronic

A PACKAGING PRODUCTION LINE

The Bartelt Packager and Cartoner . . . Joined for integrated production. Automatic from web roll to finished package. Versatile Pouch forming . . . fins, gussets, multiples, specials. Versatile Carton handling . . . many types, sizes for one to six pouches.

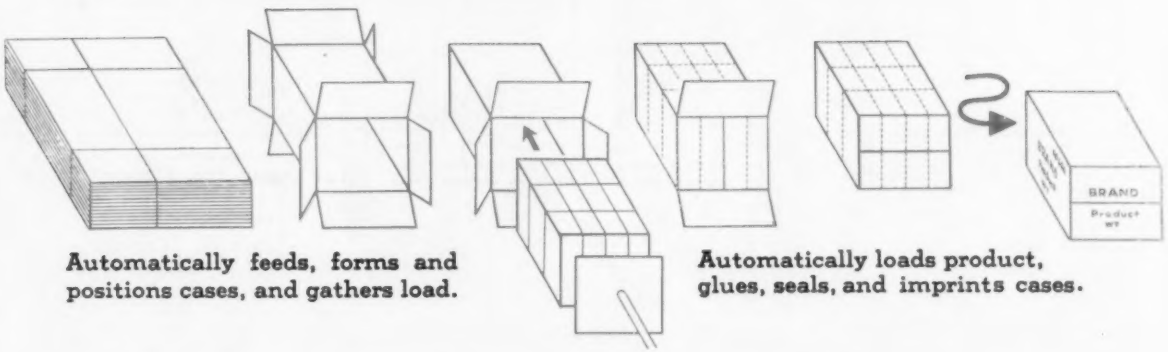
BARTELT ENGINEERING COMPANY
1900 Harrison Avenue, Rockford, Illinois
New York Office, 370 Lexington Avenue



Product Handling

let Packomatic® equipment do any or all your casing operations AUTOMATICALLY:

T.M. Reg. U. S. Pat. Off.



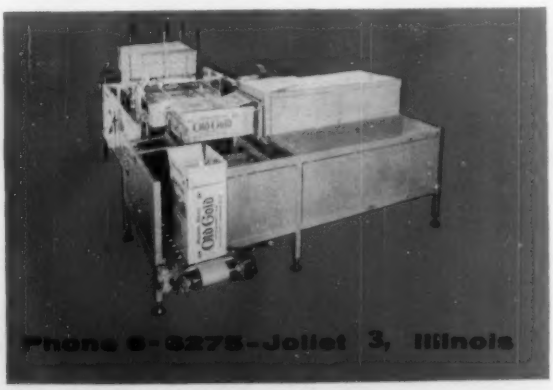
Automatically feeds, forms and positions cases, and gathers load.

Automatically loads product, glues, seals, and imprints cases.

For casing round, square, rectangular, or free-form packages of virtually any size.

If you employ even one person per shift to hand-form cases, or to hand-pack, hand-seal or hand-imprint them, then it can pay you to install Packomatic equipment. And if you employ two or more people the savings can increase proportionately. Even a **complete** automated Packomatic line requires only a minute or two of attention at infrequent intervals to match the output of a dozen pair of hands. And in addition to reducing your direct labor production costs Packomatic can, by utilizing end-opening shipping cases, reduce paper-board costs up to 25%. And mechanically end loaded cases are stronger too, because the flaps give added resistance to weight and shock. In addition, they stack better because their uniformly flat sides enables keying of pallet loads. Write, wire or phone us for facts on how to reduce your casing costs.

FOR EXAMPLE: This Packomatic machine at the P. Lorillard Co. automatically forms and positions cases, end-loads regular or king-size cartons of Old Gold cigarettes (60 cartons per case) and up-ends cases for sealing — at the rate of 400 cartons per minute, or nearly 5 million smokes per hour.



PACKOMATICS include Case Sealers • Case Opener-Loaders • Case Packer-Gluers • Case Imprinters • Bale Sealers • Automatic Equipment for Shelf Carton Making, Feeding, Filling and Closing • Round Paper Can Mfg. Equipment

J. L. FERGUSON COMPANY - Box 1226 Phone 6-6275-Joliet 3, Illinois

See our revolutionary OMNIMATIC-ROTOPRESS. Booth #823—Nov. PMMI Show—New York Coliseum

U.S.I. POLYETHYLENE NEWS

A series for plastics and packaging executives by the makers of PETROTHENE® polyethylene resins

NOVEMBER, 1959 — U. S. Industrial Chemicals Co., Division of National Distillers and Chemical Corporation — 99 Park Ave., N. Y. 16, N. Y.

Packaging Notes

A low-cost, semi-automatic bagging machine puts canned and bottled goods in preprinted polyethylene bags to stimulate larger unit sales to the consumer.

A brewery, for example, has increased its sales by replacing its conventional six-pack with an eight-can bagged unit. Quart bottles are bagged in units of three. As an added consumer advantage, the polyethylene bags can be filled with ice to keep the beer cold. The bagging machine can be used to package such canned and bottled products as soft drinks, soups, juices, and dog foods.

A new polyethylene and paper pouch for liquid bleach has been introduced. This disposable pouch for coin laundries holds 2½ ounces of highly corrosive 15% sodium hypochlorite. It is expected to replace the present eight ounce returnable bottles which hold 5% sodium hypochlorite.

The pouch is constructed of paper coated with 3½ mil polyethylene film. A special tear tape at one end permits opening of the package quickly and easily. The package reportedly is lower in cost. It has a shelf-life of six months.

Containers with built-in polyethylene coated paper liners are being used by a frozen foods company to package a portion of its frozen fruits.

Designed to eliminate the conventional overwrap, the new package is said to prevent leakage of the package's contents both before freezing and after defrosting. Liner and carton flaps are automatically sealed, with a combination of polyethylene heat sealing and adhesive.

The new package is more convenient to open than previous metal and fibre cans. Its special interlocking top flaps can easily be ripped off by the consumers without danger of spilling the contents. The new polyethylene lined carton stacks better and provides more printing area. It reportedly has reduced packaging costs and increased packaging speed.

Ralph Knight Appointed Vice President at U.S.I.

Ralph M. Knight has been appointed a Vice-President at U.S. Industrial Chemicals Co. The new appointment was announced by Dr. Robert Hulse, General Manager of the U.S.I. Division.

Mr. Knight will be responsible for long range planning and coordination of U.S.I.'s polymer development program. He will continue to direct the company's Polymer Service Laboratory as well as coordinate its efforts with other plastic activities in the company. Mr. Knight joined U.S.I. in 1953 as Polyethylene Manager. He is a graduate of Newark College of Engineering.

U.S.I. Plans 50 Million Pound Polyethylene Resin Expansion

Latest Increase Will Make U.S.I. World's Second Largest Producer

U.S.I. has announced plans for a new increase in production capacity of PETROTHENE polyethylene resins — this time 50 million pounds. The planned expansion will be at U.S.I.'s new Houston plant started up in February of this year. This plant, currently being upped from 75 to 150 million pound production per year, will be still further expanded to produce 200 million pounds.

This is part of U.S.I.'s new polyethylene plant located at Houston, Texas, at the time that finishing touches were being made on product silage units last spring. Originally built with an annual capacity of 75 million pounds, the plant is currently being upped to 150 million pounds, will have a final capacity of 200 million pounds, when further expansion is complete next year.

The expansions are expected to be complete by mid-1960, giving U.S.I. an overall production capacity of 300 million pounds annually. This will make the company the second largest among all polyethylene producers in the world.

Growth Has Been Spectacular

U.S.I.'s growth in the polyethylene field has been spectacular. Starting with a production capacity of 26 million pounds in 1955, the company will have realized increase in production of well over 1000% when the expanded facilities go on stream.

Along with this growth has come technical leadership in the field of polyethylene processing, particularly in packaging film. Eighteen months ago, U.S.I. pioneered a new technique for producing crystal-clear cast polyethylene film that is finding extensive application in large volume overwrap and bread wrap markets. While U.S.I. has specialized in low and medium density resins, it has done extensive research work on a new process for making high density polyethylene. The process is said to be superior to any now in use. U.S.I. also is studying the polypropylenes and other polyolefin copolymers in pilot plant operations.

Wide Range of Resins Available

In all, PETROTHENE polyethylenes are available in some 70 different resins, each varying in melt index, density, strength, clarity, gloss, slip, stiffness, and other properties. This wide range of resin properties is a result of U.S.I.'s program of tailor-making resins to meet specific molding and extrusion requirements.

Polyethylene Netting Made With Special Extrusion Die

A new polyethylene netting, extruded from a special reciprocating die, promises to have many decorative and practical applications. The die cross extrudes the polyethylene filaments, welding them together at point of contact while the resin is still molten. The filament junctions are stronger than is possible with heat sealing.

Both decorative and practical applications are foreseen for continuous tubular netting like this which is now being produced.

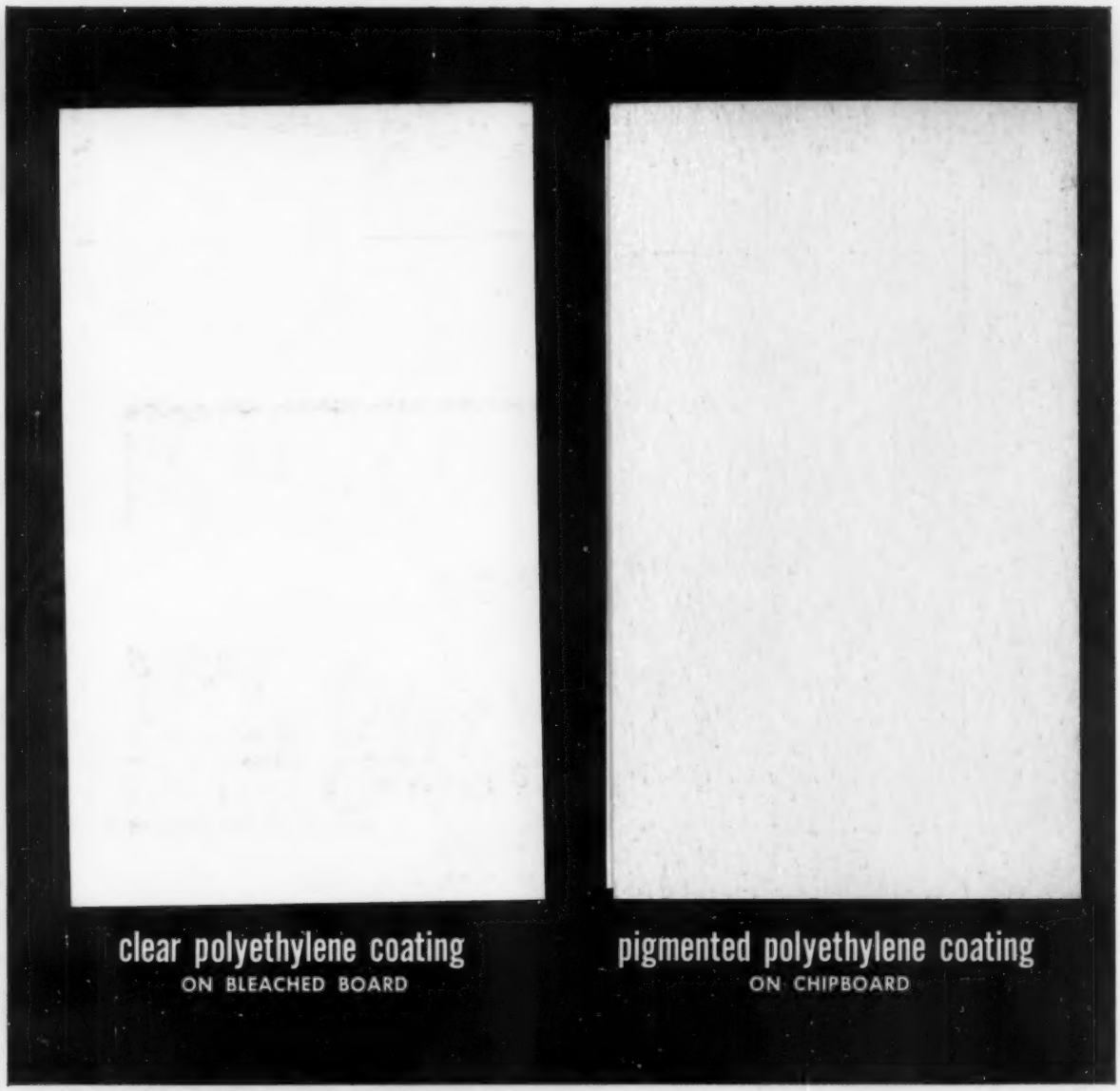
At present the net can be produced in widths up to 36 inches and in tubular form. Multicolored effects can be obtained and the mesh can be varied from very fine to fish-net coarseness.

The manufacturer is now developing an automatic bag machine for packaging vegetables and other produce.

New Ultraviolet Absorber For Polyethylene

A new ultraviolet absorber for polyethylene is currently being evaluated. Thus far, carbon black has been the most commonly used screen for ultraviolet light.

The new compound, if successful, will permit extended outdoor use of clear and colored polyethylene compounds. Field tests have already shown that 10-mil polyethylene film mixed with .171% by weight of the absorber, retained 85% of elongation after two months use in strong sunlight.



THE CHOICE IS UP TO YOU...

You know about polyethylene-coated board and the wonderful job it's doing in the food and industrial packaging fields. But do you know about *pigmented* polyethylene coatings and how they can upgrade lower-priced board, allowing you to choose from a wider range of board stock and to achieve even greater flexibility in your choice of packaging materials.

Investigate both kinds of polyethylene coatings; you'll find they're more versatile than ever before.

Clear or pigmented—extruded polyethylene coatings are tough, scuff resistant, unusually adherent. They have superior grease and moisture resistance. They will not scratch other surfaces. They heat seal readily, offer good printability.

Extruders and packagers who make or use polyethylene-coated board may obtain information and technical assistance by writing to U.S.I.

EXTRUDERS—

PETROTHENE® polyethylene extrusion coating resins, manufactured by U.S.I., have good drawdown properties with a minimum of neck-in, give excellent adhesion even down to the thinnest gauges.

U.S.I. INDUSTRIAL CHEMICALS CO.
Division of National Distillers and Chemical Corp.
99 Park Ave., New York 16, N. Y.
Branches in principal cities

New Merchandising Idea By

P. Lorillard Co.

Show-Packaged BY PLASTIC ARTISANS

Designed to make three famous brands even more famous, this new SLIDON* by PLASTIC ARTISANS displays two packs and a lighter on a contoured plastic platform under gleaming clear plastic.

*Registered Trade Mark

Let Plastic Artisans Give Your Product New Sales-Appeal With Formed Plastic Display Packaging.

PLASTIC ARTISANS INC.
Dock Street & Martin Place
Port Chester, N. Y.

PA

Custom-designed, mass-produced packages, package components, sampling devices, etc. in clear, opaque and colored plastics.

PA-122

TWIST

QUALITY CONTROL
AT ANCHOR HOCKING MEANS
PRODUCTION EFFICIENCY FOR YOU!
Test after test after test! From the selection of all raw materials used in the manufacture of Anchorglass® containers and Anchor® closures to the final production line inspection, Anchor Hocking employs literally hundreds of exacting controls, tests and checks daily. All this control work, involving highly trained chemists, bacteriologists, engineers, other technicians and personnel, is done but for one reason. And that is, to provide you with uniform, high quality glass containers and closures that will give you high-speed production and dependable protection for your products. So contact an Anchor Man now. Anchor Hocking Glass Corporation, Lancaster, Ohio.
ANCHOR HOCKING
Put an Anchor Man on your team

Space-Saving Tray Elevator Boosts Mueller Production!

Because this Robo-Lift Tray Elevator ascends straight up, C. F. Mueller Co., Jersey City, increased production without costly remodeling. To cope with stepped-up consumer demand, the nation's largest macaroni manufacturer rearranged and increased the capacity of its product weighing, packaging, cartoning and sealing operations. To hike the output, engineers placed the automatic sealing unit high above floor level. However, due to cramped quarters, a vertical elevator was needed to carry product-filled cartons to the sealer.

Only the Lynch Robo-Lift Tray Elevator met all requirements and specifications.

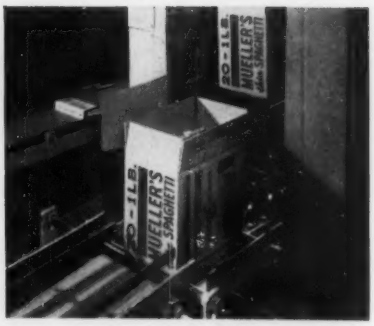
Space-saving and jam-proof, the automatic upright operates a sixteen-hour shift, handling cartons at the prescribed rate of six-per-minute. Featuring unique infeed and discharge systems, the elevator cannot jam —ever. And, unlike bar and belt-type models, it doesn't mar or rub a carton's printed message. Through fixed positioning of trays, pendulum action is eliminated and cartons ride safe, secure, easy.

Robo-Lift Tray Elevators are available for a variety of lifting or *lowering* assignments. For full details on how Tray Elevators serve, request free literature, today.

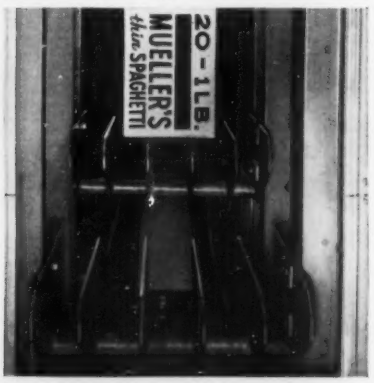
Write for illustrated booklet which details the complete story titled, "LYNCH Robo-Lift Tray Elevator . . . moves cartons vertically, saves time, money, floor space at C. F. Mueller Company."

Lynch Corporation—*Manufacturing Engineers of automatic processing equipment for the glass, packaging, plastic and other industries.*

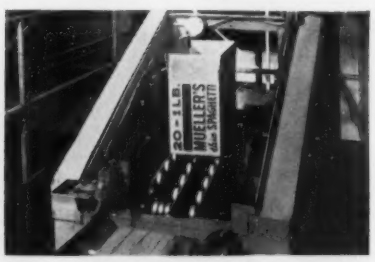
Atlanta • Chicago • Wallington, N.J. • Kansas City, Kansas • San Francisco



Close-up shows a filled carton beginning its gentle Tray Elevator ride upward. In the foreground, the next carton in line has moved off conveyor belt and is automatically held back until oncoming tray appears.



Moving straight up, the carton rests on a fixed, non-pendulum tray that neither swings nor sways . . . always holds carton steady, secure. Note how carton's open end bottom is held in a closed position until it reaches the sealing unit.



Just beneath the room's ceiling, the carton leaves the tray via rollers. Conveyor belt then takes over, moving carton through the sealing operation. Although a six-per-minute schedule is timed here, the elevator can move up to 15 cartons every minute.

LYNCH
CORPORATION
Anderson, Indiana

NEW DESIGNS IN MARLEX

New 22-ounce Armour Chiffon detergent containers made of MARLEX* show tremendous sales increase over metal cans!

The big news in household products packaging today is the switch from metal and glass to containers made of rigid polyethylene. In addition to being lighter in weight, these plastic bottles cannot rust to leave unsightly rings on shelves and porcelain surfaces. They do not dent . . . will not nick porcelain, won't chip dishes or glassware, if accidentally dropped. And—very important—they can be designed in a wide variety of attractive and functional shapes, with the color molded in.

Like other leading detergent manufacturers, Armour and Company recognizes the many advantages of bottles blow-molded from MARLEX 5000 Series Detergent Grade Resin. MARLEX offers superior stress cracking resistance, longer shelf life, and greater stiffness and strength per mil of wall thickness.

MARLEX 5000 Series Resin is so chemical-resistant and impermeable that it is being widely evaluated for use as a container material for such hard-to-hold household products as laundry detergents, disinfectants, bleaches and toiletries, as well as waxes, polishes and cleaning agents.

In fact, no other type of material serves so well and so economically in so many different applications. How can MARLEX serve you?

*MARLEX is a trademark for Phillips family of olefin polymers.

PHILLIPS CHEMICAL COMPANY, Bartlesville, Oklahoma, A subsidiary of Phillips Petroleum Company

PLASTICS DIVISION OFFICES

NEW ENGLAND	NEW YORK	AKRON	CHICAGO	WESTERN	SOUTHERN	EXPORT
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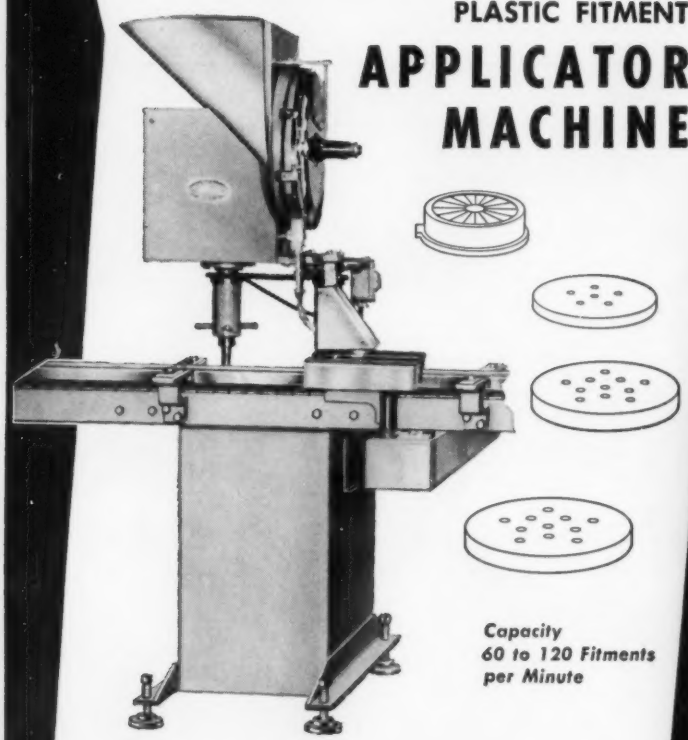
MARLEX®

Tops them all

- A MODEL FOR EVERY PURPOSE
- A SPEED FOR EVERY NEED

RESINA
CAPPERS

PLASTIC FITMENT
APPLICATOR MACHINE



Capacity
60 to 120 Fitments
per Minute

Operates with or without Screw Capper. Selects and applies varied sizes . . . also solid type fitments conventional in drug and pharmaceutical packaging. Remarkably simple and efficient to operate . . . at low, LOW maintenance cost.

AND SPECIAL MACHINERY
Descriptive Literature on Request

RESINA
AUTOMATIC MACHINERY CO., INC.
572 Smith Street Brooklyn 31, N. Y.

Agents in Principal Cities throughout United States and Canada.

TOPS THEM ALL

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R. P. ANDERSON CO.
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Florida
LOUIS L. ROCCA
7272 N. E. 6th St., Miami 38, Fla.

New York
PAUL BALZE
P. O. Box 191, Tuckahoe, New York

North Dakota, South Dakota, Minnesota, Iowa & Western & North-Eastern Wisconsin
BOOTH & ASSOCIATES
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California, Arizona & Nevada
BINER ELLISON CO.
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Mailing Address: P. O. Box 2411
Terminal Annex, Los Angeles 54, Cal.

New York, New Jersey
HORNNEY & CO.
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1807 Fir Street, Vancouver, B. C.

Visit us at the PMMI Show New York Coliseum, Booth # 203 November 17 thru 20th.

Q: And what else do you associate with STAN-PAK?

Of course...

FLEX-VAC®
vacuum packaging

STAN-PAK™ offers you single-source convenience. Film, foil, paper and board. Laminations. Sheet and roll stock. Bags, pouches, boxes, sleeves. Labels. Lining materials. Inner and outer wraps. Vacuum and controlled atmosphere packaging. Special purpose containers. Nineteen mills and manufacturing plants. Sales offices throughout the United States.

Tops them all

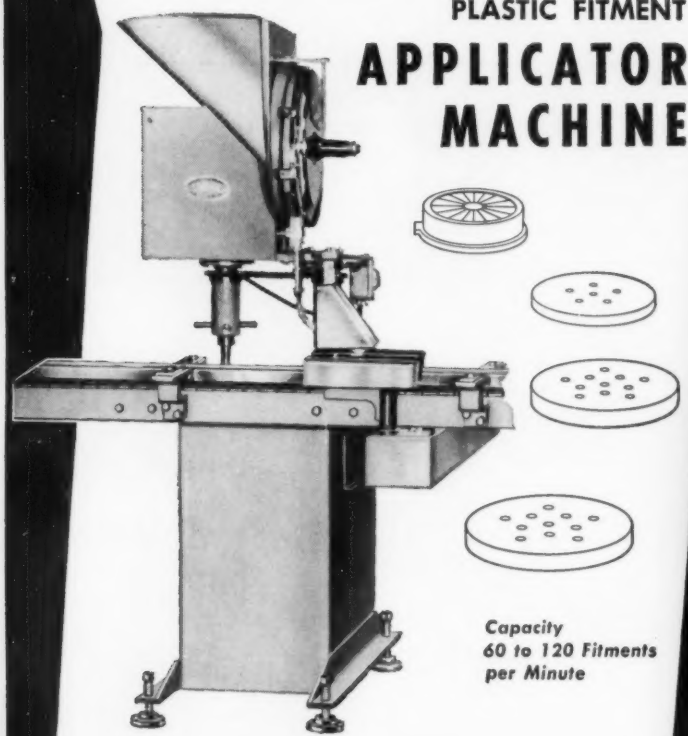
- A MODEL FOR EVERY PURPOSE
- A SPEED FOR EVERY NEED

RESINA

CAPPERS

PLASTIC FITMENT

APPLICATOR MACHINE



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7272 N. E. 6th St., Miami 38, Fla.

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P. O. Box 191, Tuckahoe, New York

North Dakota, South Dakota, Minnesota, Iowa & Western & North-Eastern Wisconsin
BOOTH & ASSOCIATES
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Mailing Address: P. O. Box 2411
Terminal Annex, Los Angeles 54, Cal.

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Maine, Vermont, New Hampshire, Connecticut & Rhode Island
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Ohio, Southern & North-Eastern Indiana & Kentucky
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Eastern Canada
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FLEX-VAC®
vacuum packaging

One of the many areas in which STAN-PAK can help you get packaging mileage. Now one of the country's largest integrated packaging manufacturers, Standard Packaging offers you a comprehensive service, national in scope. Capacity . . . both manufacturing and creative. Representatives who know their business . . . and regard it as a privilege to study yours. STAN-PAK: a good company to know, and depend upon.

STAN-PAK™

STANDARD PACKAGING Corporation
America's fastest growing packaging source
Executive offices:
200 East 42nd Street,
New York 17, N. Y.

Subsidiaries:

Fonda Container Co., Inc.
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Divisions:

Allegheny Label Division
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Chemical Fine Paper and Board Division
Holyoke, Mass.

Closure Division
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Clifton, N. J.

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Gebhart Folding Box Division
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Modern Packages Division
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National Metallizing Division
Trenton, N. J.

Royal Lace Paper Division
Brooklyn, N. Y.

See it in operation at the PMMI Show—Booth 1005

FMC Checkweigher with smooth, positive 3-way segregation.

NEW *fmc* high-speed electronic Checkweigher

. . . gives you hairline accuracy plus segregating flexibility

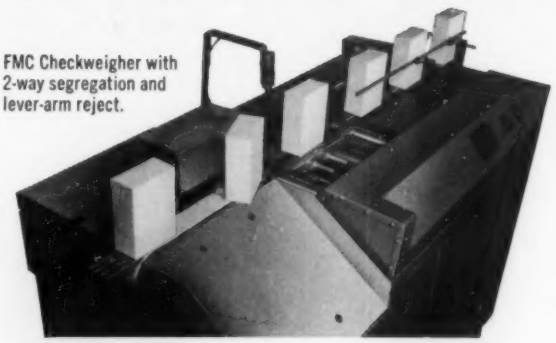
Whatever your requirement there is probably an FMC Checkweigher to provide close and accurate control of your production. Speeds up to 400 containers per minute handle the output of most production lines. And with three basic reject methods to choose from, for both 2-way and 3-way segregation, the ideal system for your problem and package can be engineered. The result is a precision piece of equipment perfectly matched to your production requirements.

Accuracies up to ± ¼ % of the total package weight are possible with all three segregation methods:

3-Way Segregation—This system is recommended for open packages and tall containers. After the package is weighed and classified, the metal slats of the conveyor move the package straight ahead or ease it to the right or to the left, depending upon whether it is acceptable, underweight or overweight. The action is positive, yet smooth and gentle.

2-Way Segregation with Air Reject—With this system a jet of air removes rejected containers from the conveyor. It is most effective with small, closed containers and can be adjusted to reject either underweights, overweights, or both.

2-Way Segregation with Lever-Arm Reject—Recommended for heavier, closed containers, this system offers the same three reject choices as the air system.



FMC Checkweigher with 2-way segregation and lever-arm reject.

FMC Checkweighers handle cans, jars, trays or boxes—virtually any semi-rigid container with one flat surface ranging in size from 1½″ x 1½″ to 10″ x 10″. They are splashproof, easy to clean, and occupy only 48″ x 24″, with the height adjustable to fit production lines. The electronic system is mounted on a single plug-in chassis and housed in a slide-out drawer for easy maintenance.

In addition to the basic equipment, the checkweigher can also be equipped with a feedback control, recording devices to produce a printed record of production, and special-construction models for dusty or explosive conditions.

For complete information about versatile FMC checkweighing systems, call your FMC representative or write:

Putting Ideas to Work

FOOD MACHINERY AND CHEMICAL CORPORATION

FMC Packaging Machinery Division

Stokes & Smith Plant

4904 SUMMERDALE AVENUE, PHILADELPHIA 24, PA.

NEW AND BRILLIANT FROM IPI

FAST SETTING
QUICK DRYING

Speed King
CARTON INKS

FOR LETTERPRESS AND OFFSET

The quick set, fast dry and high gloss of IPI's revolutionary Speed King inks for general commercial use are now available to package printers!

Speed King Carton inks set so fast—even on patent coated boards—that offset rarely is a problem. This means higher press loads without racking, less handling, and considerably less spray than needed for conventional gloss carton inks.

Speed King's gloss on clay coated and on cast coated stocks such as LUSTERKOTE, KROMEKOTE, ULTRA-GLOSS, etc., rivals that of the finest gloss carton ink. And because it's a more *uniform* gloss, even lower cost stocks print better!

Speed King's split-second set and amazing dry (as little as 2 hours) mean faster processing of the printed board—with obvious advantages to the carton printer.

Speed King is stable on the press; halftones don't muddy up, small type stays open.

These wonderful new inks—both letterpress and offset—are now available from your nearest IPI branch, in a wide range of popular carton colors.

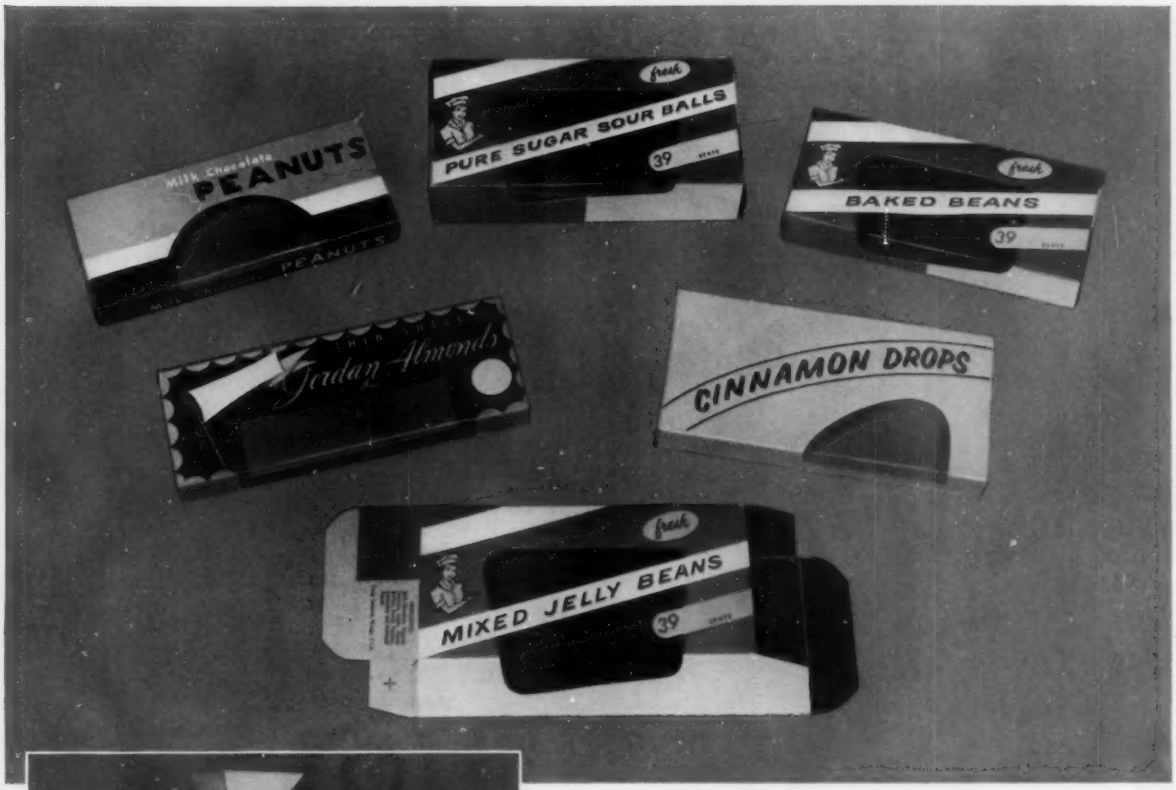
Try them on a really tough job—and see the definite difference!

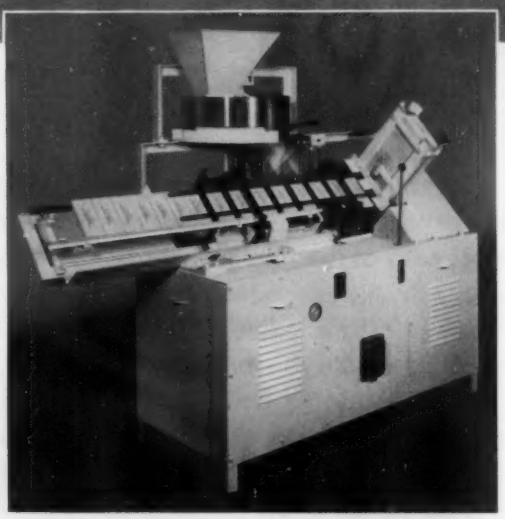
IPI, IC and Speed King are trademarks of Interchemical Corporation

ipi
INTERCHEMICAL • PRINTING INK
CORPORATION DIVISION
EXECUTIVE OFFICES: 67 WEST 44th STREET, NEW YORK 36, N. Y.

SEE IT AT THE SHOW*...

New U. S. hard candy packer fills a family-size box every second!





*PMMI SHOW-BOOTH 1104
New York Coliseum, Nov. 17 thru 20

Typical hard candies such as baked beans, cinnamon drops, jaw-breakers, Jordan almonds, milk chocolate peanuts, jelly beans and candy corn, are packed at a running speed of 60 cartons-per-minute in the new U.S. C-24 Cartoner.

Suitable for packing cartons in the ¼-lb. to ½-lb. size range, the C-24 is designed specifically for the popular larger size (supermarket or family-size) candy cartons. The C-24 picks the flat carton from the magazine, opens it, tucks the bottom flaps, volumetrically fills the carton, then tucks in the top flaps.

The C-24 is ideal for manufacturers who package a variety of hard candy items in the same size package. It will handle all products without adjustment when package size and content volume are uniform.

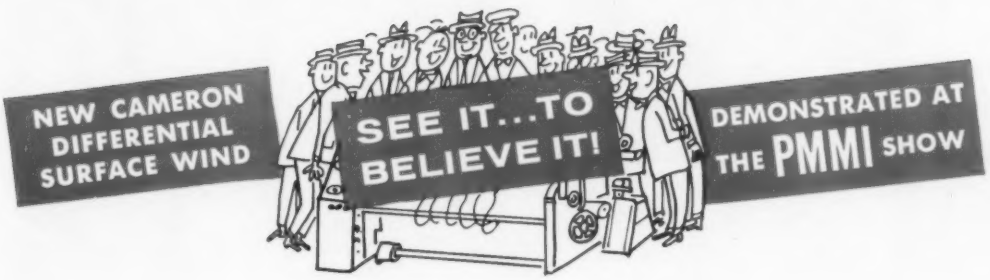
This machine can be built for one carton size within the range of 6" x 2" x ¾" minimum to 7" x 3½" x 1" maximum — or to special dimensions outside these limits. One operator is required for supervision. Write US today for complete details.

PACKAGING MACHINERY MANUFACTURERS INSTITUTE PMMI MEMBER

U. S. AUTOMATIC BOX MACHINERY CO., INC.

122 Arboretum Road, Roslindale, Boston 31 Mass.

NOW...see how to slit and rewind perfect rolls of "high slip" polyethylene film at 1000 feet per minute!



See the new Differential Surface Wind Attachment* developed by Cameron Specialists to provide optimum control in the winding of "high slip" films. The new winding principle conquers one of the most difficult of all winding problems – the high speed production of perfect rolls of polyethylene and other off-caliper, stretchy, "high slip" films. See it at the PMMI Show, New York Coliseum, November 17-20, 1959. If you can't get to the Show, write for information.

*The new Cameron Differential Surface Wind Attachment is designed for use on duplex winders such as the Cameron "620" series employing single or combination shear-cut, score-cut or razor-cut slitting.

Cameron Machine Company, Franklin Road, Dover, N. J.
Canada: Cameron Machine Co. of Canada, Ltd., 15 Hatt St., Dundas, Ontario
France: Batignolles-Chatillon, 5 Rue De Monttessuy, Paris (7e) France

CAMERON
a team of specialists

6A-831

53 years devoted exclusively to the design and manufacture of slitting, roll winding, unwind and web control equipment.

To Solve Your FLEXOGRAPHIC INK PROBLEMS

BBD technical assistance and laboratory research help tailor BBD inks to your special flexographic ink problems . . . whether the problems are mechanical, such as: die-cutting, creasing, folding, corrugating or chemical, such as: resistance to bleed in water, waxes, fats, oils or greases.

Implementing these laboratory facilities is the famed BBD "shirt-sleeves" service . . . where trained and experienced flexographic ink specialists are ready and available to help you at press-side.

If you want to know more about these special services, or see samples of any BBD flexographic ink, simply contact your nearest General Printing Ink office.

DOUBLE DUTY INKS for FLEXOGRAPHIC or GRAVURE PRINTING

	Cellophane: Plain	Cellophane: Moistureproof	Cellophane: Saran and Polyme-coated	Cellophane: Polyethylene (Treated)	Aluminum foil	Paper & Board	Glassine	Pliofilm	Saran	Vinyl	Polystyrene	Acetate	"Mylar" & other Polyester films
ACETOPAKE												•	
EXCELLOPAKE 400 X-TRA	•	•		•	•	•	•						
FLEXOKRAFT						•	•						
FOILBRITE					•								
SPEED-E-BRITE	•	•	•	•	•	•	•		•*		•*	•*	•
THERMOFAST		•											
TRANSLUSTRO						•	•						

HYDROTONE						•							
MUL-T-BRITE	•	•	•	•	•	•	•						•
PLIOPAKE								•	•	•	•		
SAFE-T-BRITE	•		•	•	•	•	•						•
VELVATEX						•	•						

**Depending on end-use*

GPI Sun

Branches in all principal cities

Bensing Bros. and Deeney Flexographic Inks

Product of

General Printing Ink Company

Division

Sun Chemical Corporation

750 Third Avenue, New York 17, N. Y.

At the PMMI SHOW SCANDIA has something brand new*

to show you in wrapping, multiple-wrapping, bundling and cartoning.

SCANDIA

PACKAGING MACHINERY COMPANY

500 Belleville Turnpike • North Arlington, New Jersey, WYman 1-8400

* *See us in Booth 1022, New York Coliseum, November 17-20, 1959*

MISS WATSON: Where have you been all day, Fearless? I've had several calls for you.

FEARLESS FULLER: I became involved in a very interesting case and the time just flew by.

MISS WATSON: I can imagine, if that lipstick stain on your collar is any indication!

FEARLESS FULLER: Hush your suspicions, Miss Watson. That stain happens to be cranberry juice.

MISS WATSON: Cranberry juice?

FEARLESS FULLER: Yes. It seems one of the local cranberry canners was using an adhesive other than Fuller's and had trouble with his labels sticking.

MISS WATSON: I trust you solved the problem.

FEARLESS FULLER: Naturally. After much investigation, I recommended switching to one of our Fuller adhesives. For positive, trouble-free labeling at any can temperature you can't beat Fuller's.

MISS WATSON: Yes, but that still doesn't explain that stain on your shirt collar.

FEARLESS FULLER: It does if you remember what Fuller men are noted for.

MISS WATSON: Shirtsleeve service?

FEARLESS FULLER: That's right. We at Fuller aren't afraid to roll up our sleeves and pitch right in until a problem is solved. We use our hands as well as our heads.

MISS WATSON: Oh, you're marvelous at solving these cases, Fearless. I'll bet your pipe even contains a thinking man's filter.

FEARLESS FULLER: No, Miss Watson, it's just that a Fuller man always knows the solution to adhesive problems.

Your Fuller man is ready with the correct solutions on any adhesive problems for you, too. Contact your nearby plant.

H.B. Fuller Co.

255 Eagle Street, St. Paul 2, Minn.

ST. PAUL, MINN. • ATLANTA, GA. • BUFFALO, N.Y. • CHICAGO, ILL.
CINCINNATI, OHIO • DALLAS, TEX. • KANSAS CITY, MO.
LINDEN, N. J. • LOS ANGELES, CALIF. • MEMPHIS, TENN.
PORTLAND, ORE. • SO. SAN FRANCISCO, CALIF. • TAMPA, FLA.
also WINNIPEG, CANADA

an "eye-appealing, sales-appealing" *label has a magnetic power all its own...*

In these days of self-service buying, your label must say powerful things about your product. Things like . . . "Pick me up, try me out" . . . and "Buy me—I'm as good as I look!" This power to attract . . . this magnetism that helps turn browsers into buyers is typical of the quality found in labels produced by Rotogravure Packaging.

At Rotogravure, you'll find "sales-winning" ideas from design to finished product. Ideas for heat seal labels on foil and paper, overwraps on foil, paper and laminated stock. For "sales-pulling" labels, call the man from Rotogravure Packaging today.

For Your Convenience
We have a production policy of NO MINIMUM RUNS

SALES REPRESENTATIVES:

JOSEPH T. CARDELLIO 16042 Blackhawk Granada Hills, Calif.	FRED C. STROUT P.O. Box 5079 Minneapolis 6, Minn.	Andrews & Company 19015 Van Aken Blvd. Shaker Heights 22, Ohio	ROGER D. GUSTAFSON 1409 Westaire Peoria, Illinois

Rotogravure Packaging, INC. **ADDISON, ILLINOIS**
Phone: KIngswood 3-9555

SOME CALL IT ALCHEMY!

But . . . Here at EXTRUDO-FILM we would rather make *better* polyethylene film than make gold.

EXTRUDO-FILM has built the world's most modern film extruding plant. With its complete research laboratories and quality control center EXTRUDO-FILM produces more perfect polyethylene film than ever before. The big news from EXTRUDO-FILM's Plant No. II in Pottsville, Pennsylvania is the development of treated sheeting with dependable ink-adhesion, high-speed printability, even wind, excellent clarity and, of course, yield. EXTRUDO-FILM's treated sheeting is available in widths from 1 inch to 40 inches and in gauges from .0004 to .012. With this research and development EXTRUDO-FILM CORPORATION will continue to grow. May we invite you to grow with us?

EXTRUDO-FILM efc CORPORATION

Plant No. I and Executive offices: 36-35 36 Street/Long Island City 6, N. Y.

POTTSVILLE, PENNSYLVANIA • 100 WEST CHICAGO AVENUE/CHICAGO 10, ILLINOIS

Background for Packaging

Notes, quotes and comments. An editorial feature

The plastics price curve still moves downward—faster than we can keep up with it. Figures given last month in our article, "Big Push on Plastics," (Oct., p. 109), forecasting a wholesale switch of liquid detergents into high-density polyethylene bottles because of their low cost, must be revised still lower in view of general price cut by producers of high-density resin late in September. The basic injection-molding grade was cut by 3 cents a pound, to a new low of 35 cents. Lively competition and growing production in all plastic resins warrants close watch on this trend by all packagers.

Watch polyethylene film move into the tobacco field. A machine now in use successfully overwraps a five-pack carton of cigars with medium-density polyethylene at a cost lower than that of cellophane. Same principle could be applied to cigarette packages. All cigarette manufacturers are watching this closely, but are reluctant to make the expenditure necessary for machine change-over. If one big brand moves, all may be forced to follow suit.

Is your packaging keyed to significant changes in U. S. households? Although the total number of households is greater by about 861,000 a year (current total over 51 million), urban and rural-nonfarm households are increasing by about 1,000,000 per year while rural-farm units drop about 100,000 annually. Contrasting shopping habits of these two groups may suggest to perceptive companies the need for a frequent inventory of their packaging appeal.

Growing market being eyed by alert packagers is in our teeming college campuses. There are now an estimated 3,780,000 college-student customers for all types of merchandise—an increase of 1,000,000 since 1956. The estimated $653 million expended by students in 1956 will be dwarfed by this year's spending. Packaging of both gift and staple items for college outlets with a special appeal to students is an approach which is well worth considering.

Challenge to packagers is evident in a new finding that 75% of the items carried by supermarkets are slow movers. A *Super Market Merchandising* study of 33 such stores in Ohio shows 10% of the items move less than one package a week, only 429 out of 2,772 stocked in a typical supermarket ring up a gross profit of as much as $1 a week. More than 1,000 items register sales of five or less packages weekly. Biggest threat to such slow-moving packaged products is the flood of new packaged goods and new packages constantly offered to supermarket operators.

Unexpected hazard in the shipment of polyethylene-bottled products was uncovered by *Armour* in its market testing of Chiffon Liquid Detergent in new high-density polyethylene bottles. When ordinary corrugated shipping cases were used, knives carelessly used in store stock rooms for opening the case sometimes punctured bottles. Armour solved the problem by adopting a tear-strip opener.

Price marking of packages has a new booster in the *Campbell Soup Co.* This time it's a price-coding system to eliminate pricing errors at checkout counters and to speed up stock inventories. At the time of packing, Campbell codes the tops of tomato soup with [*Continued on page 46*]

New recipe for
pasta packagers.....
KRAFT
Macaroni and Cheese
DINNER
See Recipe for
KRAFT DINNER
WITH FISHSTICKS
KRAFT
Spaghetti
Dinner
Package contains: Spaghetti, grated Parmesan Cheese,
You will need Tomato Paste or Sauce
Italian Style

. . . . . BRITE-PAK ENAMEL COAT

Look to a leader for leading ideas. Kraft Foods, *nonpareil* in its field, stays ahead in the packaging of pasta with sanitary Brite-Pak Enamel Coat bleached board.

To food packagers, Kraft Foods' reasons for using Enamel Coat make sound sales sense:

Snow white on both sides and all the way through, a carton made of Enamel Coat really looks *sanitary*. Compare it with the old-fashioned container and its dull, gray interior that looks so uninviting — *especially next to the product!*

Enamel Coat keeps on selling when it's taken from the store. At home, its beautifully clean look invites continued purchase.

And for brilliant full color process printing that brings product illustrations to life, Enamel Coat's gleaming surface is unsurpassed.

The big surprise is that this outstandingly white bleached board is so economical!

See how you can upgrade *your* packages . . . and still save money.

For full details, write to Bleached Board Division, West Virginia Pulp and Paper Company, 230 Park Avenue, New York 17, N. Y.

West Virginia Pulp and Paper

Background for Packaging

[Continued from page 43]

the designation "Tom," low-priced meatless soup with "1" and higher-priced soups with meat with the designation "2."

Health and beauty aids, dependent on strong packaging appeal for impulse sales, showed a greater sales gain in supermarket and other food stores in 1958 than any other product group. Although still only a small factor in total sales in such outlets (2.07%), volume in these items was 11.4% ahead of 1957, double the gains of all other supermarket and grocery-store products, according to *Food Field Reporter*. Three products whose convenience packaging is considered essential to sales and use were among the six fastest-growing products in all categories, roll-on deodorants (up 57.3%), liquid synthetic detergents (up 31.9%) and aerosol household deodorizers (up 25%).

Polyethylene-film standard sponsored by *The Society of the Plastics Industry* has now been accepted by the *National Bureau of Standards* as a voluntary industry standard and will soon be promulgated. Despite criticism from packaging-machinery interests of "loose" tolerances (see MP, *Editorial Memo*, Oct., p. 107), all agreed that the standard should be accepted as written, for the time being, rather than start complicated procedure all over again, which would be the only alternative. Once established, the standard can be revised—and will be.

The ultimate in premiums has appeared in the coffee trade, where several packers are putting just plain, hard cash in the package. Butter-Nut Coffee reportedly puts a quarter in each 1-lb. can, 50 cents in the 2-lb. size in a California promotion. Chicago's North Woods Coffee inserts seven cents and Maryland Club an unstated, variable amount. The *Wall Street Journal*, which reports this interesting news, doesn't say how the money is packaged to prevent contamination of the coffee.

Ultimate in re-use of a package appears behind the Iron Curtain. State-owned East German brewery has introduced square glass 1-liter bottles to promote beer with the slogan, "Build your house with beer." The bottles are designed to nest tightly in both shipping and building, and are available in white, brown or green. Tipplers can explain they're accumulating material for a new glass wall or even a whole house.

The non-commercial look, or soft-sell design in packaging, gets a hard look from drug-chain buyers of toiletries and cosmetics. At a recent *McCall's* seminar, six executives from six leading drug chains made critical comments which may be summed up this way: "Granted, the package today is certainly beautiful and esthetic and attractive, but certainly there is no hard sell on the package, which I think is necessary the moment we get into self service." There was also an appeal to manufacturers to identify the package with the advertising campaign more closely: "That [the package] is the only link that recalls brand advertising to our minds at the counter."

Don't count department stores out of the battle for the cosmetics market. A report by the Controllers Congress of the *National Retail Merchants Assn.* shows that department stores still handle 28.1% of all cosmetic sales to consumers. This is a drop of only 0.7% since 1957 and is still well above the 27.1% level of 1948. Cosmetics currently account for nearly 3% of department-store sales.

Unexpected result reported by a large packager of jams and jellies: If their product is packaged in a particularly attractive tumbler, raising the price appreciably, that item will far outsell the regular package in low-income areas, with the reverse being true in high-income areas. Apparently re-use of tumblers has greatest value to low-budget families.

WHAT STRENGTH...

M & Q Nylon Film has exceptional tensile strength — (with very low odor permeability and absolute resistance to oil products). It's rugged, made of Plaskon* Nylon. A.S.T.M. test results show its strength to be far greater than other flexible materials commercially available for packaging. So — lighter gauges do the work of heavier gauges of other materials. If you want the facts about this strength and all other properties (with comparisons of M & Q Nylon Film versus the other materials) send for spec sheet and a graphic example of the packaging possibilities.

M&Q PLASTIC PRODUCTS

FREEHOLD, NEW JERSEY, FReehold 8-6663

**Trade Mark of Allied Chemical Corp.*

All these products profit from auto

matic packaging in polyethylene!

One thing these products have in common is a higher profit margin—gained from high-speed machine wrapping in lower-cost polyethylene. Machines are available *today* that will wrap even irregular-shaped products in this durable plastic.

Tagged with the lowest price of any transparent film, polyethylene sells every product it protects. Bread gets the feel of freshness through the soft fresh texture of polyethylene. Candy shows its colors, invites buyers. Slippers, stockings, men's shirts, paper napkins go from shelf to customer without losing their brand-new *sparkle*.

How about *your* product?

Ask the experts about packaging it automatically in lower-cost BAKELITE Brand Polyethylene. Leading automatic wrapping machine manufacturers will fill you in on their new equipment for handling this low cost film. Or write Dept. KD-07M, Union Carbide Plastics Company, Division of Union Carbide Corporation, 30 East 42nd Street, New York 17, New York, for the special packaging booklet that gives you all the profitable facts and figures. In Canada, address Carbide Chemicals Company, Division of Union Carbide Canada Limited, Toronto 7.

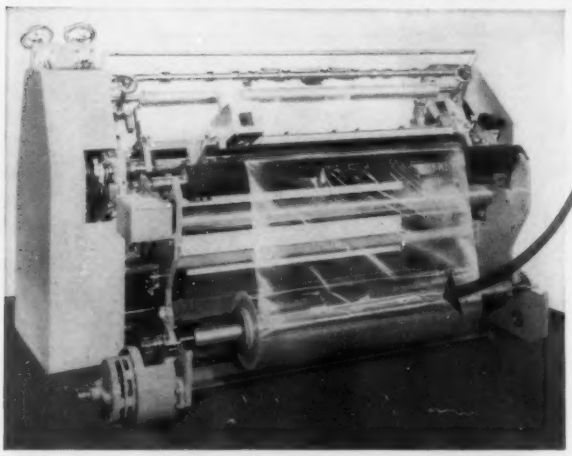
UNION CARBIDE

BAKELITE and UNION CARBIDE are registered trade marks of Union Carbide Corporation.

for handling those

PROBLEM MATERIALS

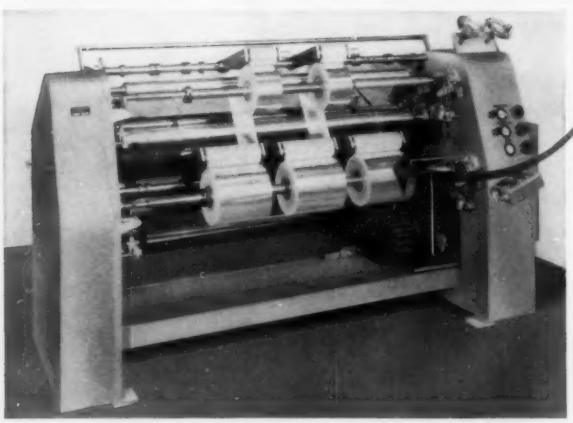
FROM WRINKLED, OFF-CALIPER ROLLS



...get

QUALITY ROLLS

LIKE THIS



Dusenbery

THE MODEL 635 SLITTER-REWINDER *with the* MODEL 804 AUTOMATIC EDGE GUIDING UNWIND

featuring the finest in tension control units

SLITTING BY

- **SHEAR**
- **RAZOR BLADE**
- **BURST**
- **SCORE CUT***

This is the concept the industry has been waiting for . . . a slitter and rewinder to give smooth, clean sided, finished rolls from badly wrinkled, off-caliper mill rolls.

The 635/804 combination gives extremely accurate edge guiding. Highly sensitive tension controls on both the unwind and the 635 slitter-rewinder enable an operator to secure maximum yield from ANY mill roll. The Model 804 is mounted integral with the slitter, requiring no additional floor space or mounting.

Individual lay-on rolls rest on the material, eliminate wrinkles, side slip and produce even, perfectly wound rolls. These light, almost weightless rolls (requiring no counter balancing) are adjustable for almost any width of cut and are easily installed and removed from machine. When the lay-on rolls are removed, you have the basic Model 635, proved the most versatile of all slitters and rewinders.

Change over from shear cut to razor blade or to burst takes only a matter of minutes, giving complete versatility of slitting methods for handling a wide range of materials.

*Score cut can be provided for special applications

VISIT US AT
THE PMMI SHOW
BOOTH 1110

JOHN DUSENBERY COMPANY, INC.
275 GROVE AVENUE, VERONA, N. J.

ENGINEERED CONVERTING EQUIPMENT

Niemand Bros. "Top Hits" Quartet

makes new records in tubular paper packaging!

More and more, producers are insisting that the package that brings their product to market offer sales appeal, product protection *and* economy. As a result, tubular paper packages by Niemand Bros. are proving their practicality more than ever before. These are tried and proved containers – built to protect your product in transit and on the shelf – designed for the appearance and dispensing convenience that moves your product off the shelf into the buyer's hand.

Our staff of package design consultants is at your service. You can put them to work for you by simply calling your Niemand representative. No obligation, of course.

CUSTOM PACKAGING
– for standout individuality

GOOSENECK CONTAINERS
– for efficient, economical small unit packaging

SIFTER TOPS
– with "eye-and-use" appeal for granular products.

PAPER CAP CONTAINERS
– for the ultimate in low cost utility

NIEMAND BROS., INC.

Manufacturers of Paper Tube Products

45-08 Ninety-fourth St., Elmhurst 73, Long Island, N. Y.

YOUR CLUE TO BETTER PAPER PRODUCTS... EXTENSIBLE CLUPAK PAPER

WRAP ANYTHING in CLUPAK paper—from potted plants to furniture, from car parts to boats—with new ease and safety! Extremely tough, flexible CLUPAK paper solves many protective problems.

DROP TEST proves far greater toughness of multiwalls made with CLUPAK kraft. It permits use of fewer plies, and lower total net basis weight—cutting cost of sacks, even as performance is improved.

STRESS FAILURE common with ordinary paper is far less frequent with CLUPAK paper, because patented, built-in stretch absorbs much of the shock energy. Shifting of groceries in ordinary bag above causes rupture—an example of why many food stores now use CLUPAK kraft bags.

DISCOVERY GIVES PAPER NEW "*TOUGHNESS*" ...MAKES IT ABSORB SHOCKS INSTEAD OF TEARING

BETTER PERFORMANCE, LOWER COST! CLUPAK Extensible Paper opens a new era in paper . . . makes it virtually a new material, with unlimited applications. For CLUPAK paper has a built-in *stretch* or extensibility which lets it absorb the shocks and strains that cause ordinary paper to rip, tear and puncture. The result is a new dimension in paper—*toughness*. And the greater *flexibility* of CLUPAK paper is important where folding, bending, wrapping or filling is involved. Already CLUPAK paper is giving multiwall sacks, grocery bags, magazine wrappers, asphalt and decorative laminates, protective bags, polyethylene coated papers and many other products better performance, often at lower cost.

BE SURE TO LOOK FOR THIS TRADEMARK

EXTENSIBLE
CLUPAK®
PAPER
*

**Clupak, Inc.'s trademark for extensible paper manufactured under its authority.*

KEY FACTS FOR BUYERS

1 CLUPAK kraft is the same as ordinary kraft except that it is stronger, tougher and more flexible.

2 CLUPAK paper can be made in many basis weights and with varying degrees of stretch. Printability, surface friction, porosity and other properties can be controlled as with ordinary paper.

3 CLUPAK paper toughness and flexibility open up unlimited new uses for paper. Clupak, Inc. carries on continuous research and development work and results are made available to all licensees.

4 CLUPAK, INC. permits the use of its trademark only on paper which meets this company's rigid toughness requirements.

Clupak, Inc., 530 Fifth Avenue, New York 36, N. Y.

Buy CLUPAK paper and products made with CLUPAK paper from:

Albemarle Paper Mfg. Co.
Calcasieu Paper Co.
Canada Paper Co. (Canada)
Crown Zellerbach Corp.
Continental Can Company, Inc.
Dynas Aktiebolag (Sweden)
Hudson Pulp and Paper Corp.
International Paper Co.
St. Lawrence Corp., Ltd. (Canada)
St. Regis Paper Co.
Union Bag-Camp Paper Corp.
West Virginia Pulp and Paper Co.

low-molecular-weight
polyethylene resin

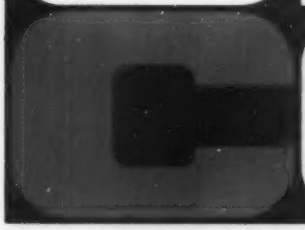
OF STOCK

including paper, paper board, foil, cloth and cellophane.

Test this sheet for moisture-vapor transmission

EXCELLENT ADHESION

Properly modified, Epolene C coatings exhibit excellent adhesion to a wide variety of materials. Try pulling this coating off with cellophane tape and you will find the paper, not the coating, fails.



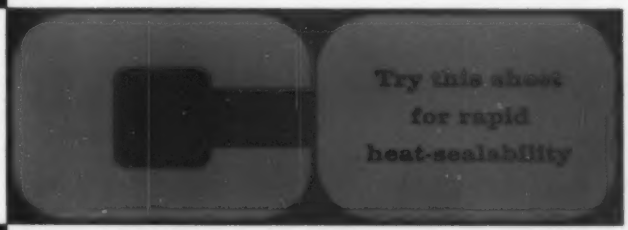
Epolene C

Eastman low-molecular-weight polyethylene resin

COMPATIBLE WITH OTHER RESINS

Epolene C can be modified with a variety of resins to reduce costs, increase adhesion, increase moisture vapor transmission resistance, and improve heat-sealability.

You can get additional information and samples of Epolene C by writing Eastman Chemical Products, Inc., subsidiary of Eastman Kodak Company, Kingsport, Tenn.



MAKES CUSTOM-COATING PRACTICAL

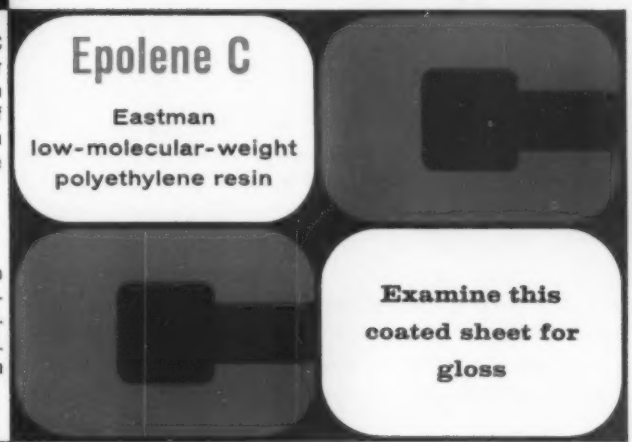
Custom runs of Epolene C coated paper can be delivered economically... and on short notice, too. Applied direct from a hot-melt to one or both surfaces, coatings of Epolene C can be tailored to the requirements of a specific end use by modification with other resins.

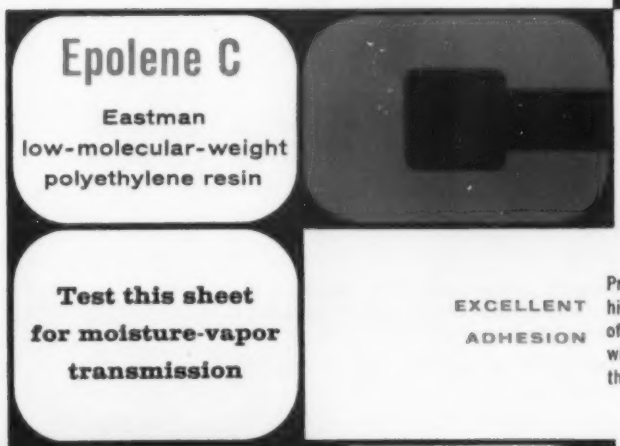
HEAT-SEALS FAST

Face-to-face or face-to-back, Epolene C permits faster sealing cycles at lower temperatures than can be achieved with other polyethylene resins. Dwell times of less than ¼ second are obtainable. You can heat-seal to polyethylene flexible packaging without melting the film.

LEAVES NO UNCOATED AREA

With Epolene C, you can coat right up to the edge of the stock as no gripper is involved, unlike polyethylene coatings applied by the extrusion-laminating process. No trimming is necessary to obtain a bleed coating.





WIDE CHOICE OF STOCK

With Epolene C, it is possible to coat virtually any web-fed stock from a hot melt, including paper, paper board, foil, cloth and cellophane.

EXCELLENT ADHESION

Properly modified, Epolene C coatings exhibit excellent adhesion to a wide variety of materials. Try pulling this coating off with cellophane tape and you will find the paper, not the coating, fails.

Epolene C

per Corp., Brooklyn, N.Y., on 80-lb. litho-coated one side./ Hot melt coated with Epolene C by Atlantic Gummed Paper Corp., Brooklyn, N.Y., on 80-lb. litho-coated one side.

WHY LEADING MANUFACTURERS INSIST ON INLAND CONTAINERS

"We've found the best shipping containers cost the least in the long run."

All too often "bargain" shipping containers boomerang. That's when they increase cost by poor performance on the packing line, in the warehouse and in transit instead of producing the savings they seem to promise.

For this reason manufacturers of every conceivable kind of product insist on Inland quality containers. Inland containers are custom-designed and precision-manufactured to keep packaging labor costs down, provide maximum warehousing efficiency, minimize shipping weight and safeguard that priceless asset—customer good will—by assuring factory-perfect condition when delivered.

You can always depend on Inland to furnish the *right* container for your product. Your nearby Inland Package Engineer is a corrugated shipping container specialist . . . call him for every requirement.

CALL YOUR INLAND PACKAGE ENGINEER

INLAND CONTAINER CORPORATION

Corrugated Fiber Boxes

Mills: Macon, Georgia; Rome, Georgia. **PLANTS AND SALES OFFICES:** Indianapolis, Indiana; Middletown, Ohio; Milwaukee, Wisconsin; Evansville, Indiana; Detroit, Michigan; Macon, Georgia; Erie, Pennsylvania; Ashtabula, Ohio; Orlando, Florida; Rome, Georgia; Biglerville, Pennsylvania; Dallas, Texas; Chicago, Illinois; Louisville, Kentucky.

Other Sales Offices in Principal Cities • Consult Your Telephone Directory

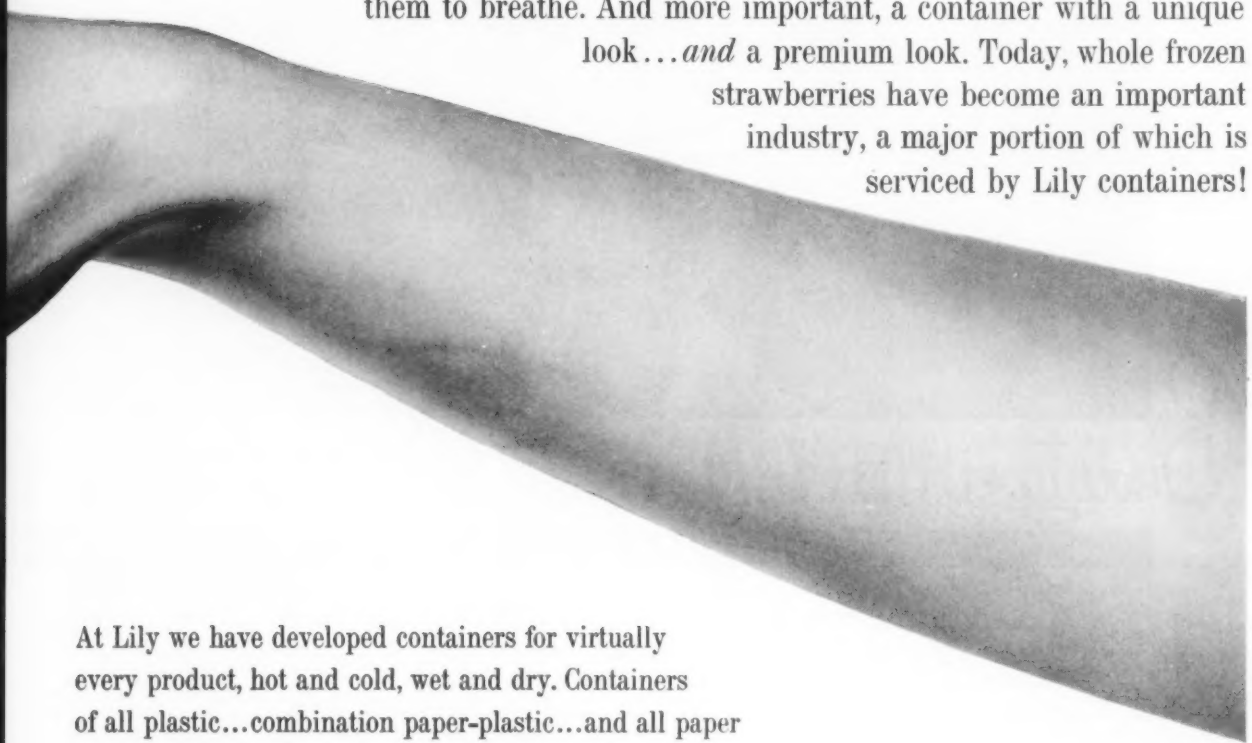
THE PLUS*THAT

*STANDOUT-ISM

TURNS THE SALE FOR YOU

Adding *one* ingredient can make the difference that turns the sale. That ingredient is "Standout-ism"—a look that stops your consumers and *sells* them! A look that's built into every Lily Container.

Here's what "Standout-ism" did for Fairmont strawberries: In 1952, Lily's packaging division developed a special container for *whole* frozen strawberries. A round container that didn't bruise the berries, and allowed them to breathe. And more important, a container with a unique look...*and* a premium look. Today, whole frozen strawberries have become an important industry, a major portion of which is serviced by Lily containers!



At Lily we have developed containers for virtually every product, hot and cold, wet and dry. Containers of all plastic...combination paper-plastic...and all paper —plain, paraffin or plastic-coated. Let us develop a container with "Standout-ism" that's best for your product. Call us, or mail the coupon.

LILY-TULIP

©Lily-Tulip Cup Corp., 1959

Lily-Tulip Cup Corporation, Dept. MP119
122 East 42nd Street, New York 17, N.Y.

I would like to hear more about Lily® containers with "Standout-ism."

NAME_____

COMPANY_____

STREET_____

CITY_____ ZONE____ STATE_____

the Lily-look with buy appeal

Beauty + UTILITY = AN IDEAL SALT CONTAINER

Here is a sparkling development in container design that *sells* and *serves* . . . as surely as its contents improve the flavor of foods. The soft glow of an aluminum foil label attracts the attention of millions of homemakers across the nation. In the home . . . and outdoors, too . . . women are delighted with the easy-to-grip shape and 12-ounce weight. This is another example how CLEVELAND CONTAINERS . . . artfully engineered . . . create the ultimate in product packaging. May we develop a container to enhance your product?

THE ALL-NEW PLASTIC CLOSURES ARE "TOPS" IN BEAUTY AND FUNCTIONAL DESIGN.

Available in colors, they can be made to harmonize or contrast with the labels. So kind to the fingers, these closures smoothly snap and lock in position! They feature openings of sift, pour AND the new precision spout.

Write for our latest Brochure on Packaging.

PLANTS & SALES OFFICES:
CLEVELAND
DETROIT
CHICAGO
MEMPHIS
LOS ANGELES
PLYMOUTH, WIS.
JAMESBURG, N. J.
FAIR LAWN, N. J.

THE CLEVELAND CONTAINER CO.
6201 BARBERTON AVE. • CLEVELAND 2, OHIO
ALL-FIBRE CANS • COMBINATION METAL AND PAPER CANS
SPIRALLY WOUND TUBES AND CORES FOR ALL PURPOSES.
CLEVELAND CONTAINER CANADA, LTD.
Plants and Sales Offices: TORONTO AND PRESCOTT, ONT. Sales Office: MONTREAL

SALES OFFICES:
NEW YORK CITY
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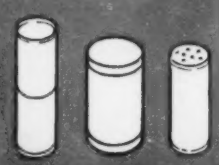
WEST HARTFORD, CONN.
• ABRASIVE DIVISION AT CLEVELAND

Why pay more? For quality products ...call CLEVELAND!



Code wrappers
for current production only

With a Tickometer, you can code wrappers, labels or small packages with date, formula, lot number, etc., by imprinting them as needed for current output.

Tickometer coding is far faster than hand stamping; cheaper than pre-printed coding; and avoids the waste of unuseable pre-coded materials.

- A Tickometer can be used to imprint codes, quantity, weight, color, price, specifications —from 400 to 1,000 items a minute. In many companies, the packaging required for the next day is imprinted in a few minutes in the afternoon.
- It handles most weights and surfaces of paper and light board, in sizes from 1 by 2 up to 15 by 15 inches. Automatically feeds and stacks, is easy to set up and use.
- The Tickometer is also a rapid and accurate counting machine for forms, coupons, tags, tickets, sales slips, etc.—counts eight times as fast as an experienced worker can count by hand. *It's so accurate that banks even use it to count currency.* It will register partial and total amounts; can be set for predetermined count. With accessories, it can sign or endorse checks, or do consecutive numbering.
- The Tickometer can be bought or rented. Pitney-Bowes service is available from 302 points. Ask the nearest Pitney-Bowes office for a demonstration. Or send coupon for free illustrated booklet and case studies.

Pitney-Bowes

TICKOMETER

Imprinting & Counting Machine

Made by the originator of the postage meter . . . offices in 121 cities in U.S. and Canada.

PITNEY-BOWES, INC.
4829 Walnut Street
Stamford, Conn.

Send Tickometer booklet and case studies.

Name _____

Address _____

COLOR-IMPACT PACKAGING . . . with the

Your product becomes its own best salesman when its color, shape and texture are seen in a clean, clear, colorfully designed cellophane package

Sight of the product is a powerful influence in stimulating sales, increasing turnover. That's why cellophane's pure transparency is so important in your package planning. It makes your product its own best salesman . . . shows *all* its appealing color, shape, texture.

What's more, cellophane is versatile. It offers you tailored protection . . . a variety of package constructions . . . high-speed machine efficiency . . . sparkling "alive" color printing. Du Pont has over 100 types of cellophane,

basic sales power of pure transparency

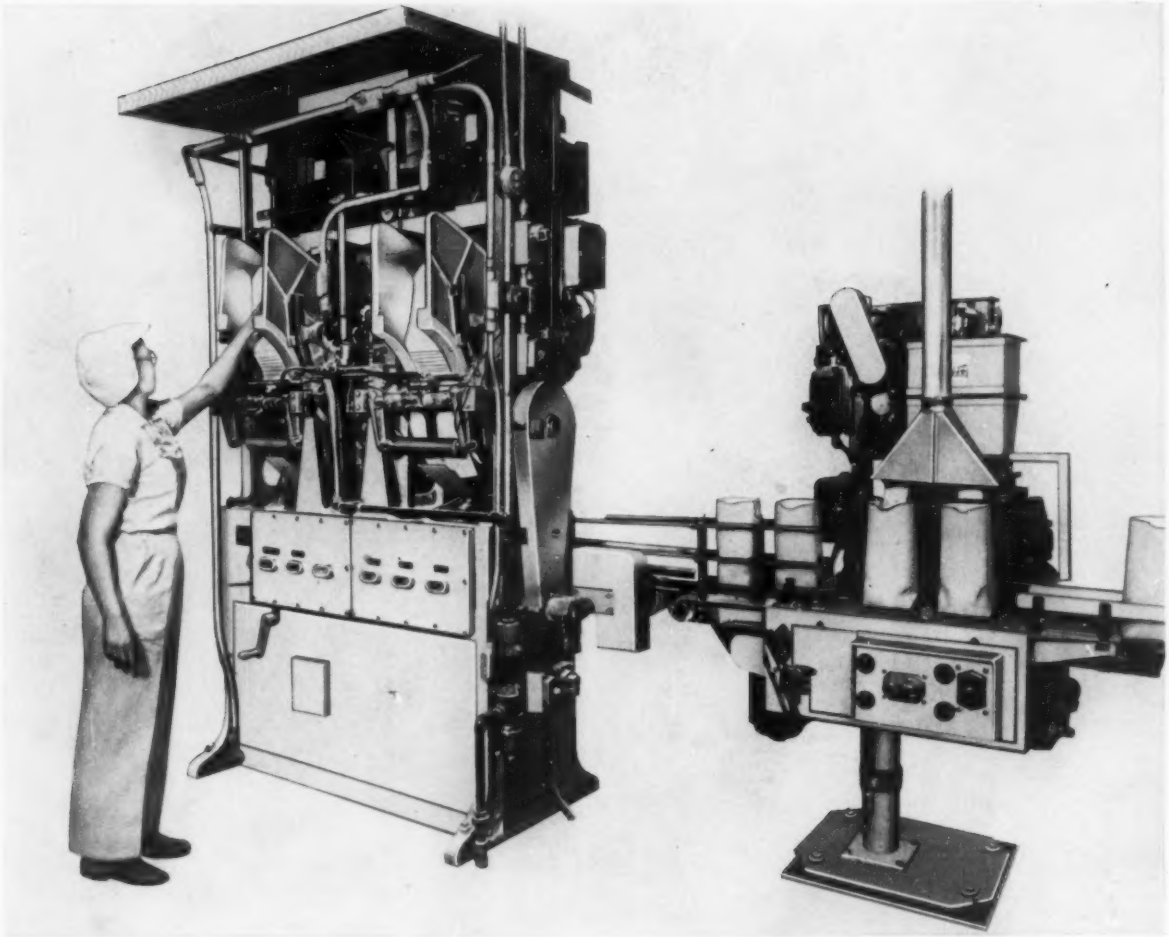
each designed to meet specific needs.

New "K" cellophanes—result of 35 years of transparent packaging experience at Du Pont—now give you greater brilliance, protection and durability. See how this experience can pay off in better, more profitable packaging for you. Contact your Du Pont Representative or, for printed films and bags, your Authorized Converter of Du Pont cellophane. E. I. du Pont de Nemours & Co. (Inc.), Film Dept., Wilmington 98, Delaware.

DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

DU PONT cellophane



JUST LOOK AT...

THIS SPEED—Better than forty 5-lb. bags per minute

THIS ACCURACY—Weight tolerance of plus or minus .2 of 1 ounce

THIS ECONOMY—One attendant can pack as many bags as two conventional packers manned by four operators

It's the New Bemis F & F* Machine and Trim-Weigh Scale

Under actual operating conditions, this F & F—Trim-Weigh duo has consistently packed 48,000 5-lb. bags per 24-hour day. Handles 2-, 5- and 10-lb. bags, with tube widths from 6 to 10½ inches.

Feeder magazine adjusts easily to all sizes. Height adjustments are equally simple. These two machines can be used independently of each other . . . and they operate efficiently with closing equipment of your choice.

Get the complete, money-saving story, today.

**F & F means, as you would guess, Feeding & Filling.*

Bemis 408 PINE ST. • BOX 49 • ST. LOUIS 2, MO.

CAMPCO PROGRESS

latest developments in plastic sheet · film · fabrication

Campco Styrene

Goes Dimensional in big way!

Giant self-service, freezer displays selling King Sun frozen fresh citrus juices, are booming sales of the packaged sunshine in scores of super markets. Because the versatile units are so light, attractive, and easy to move—stores can put them to work in different freezer locations . . . move them to meet changing merchandising opportunities.

Dimensional Products Inc. of Milwaukee, a leading producer of p-o-p

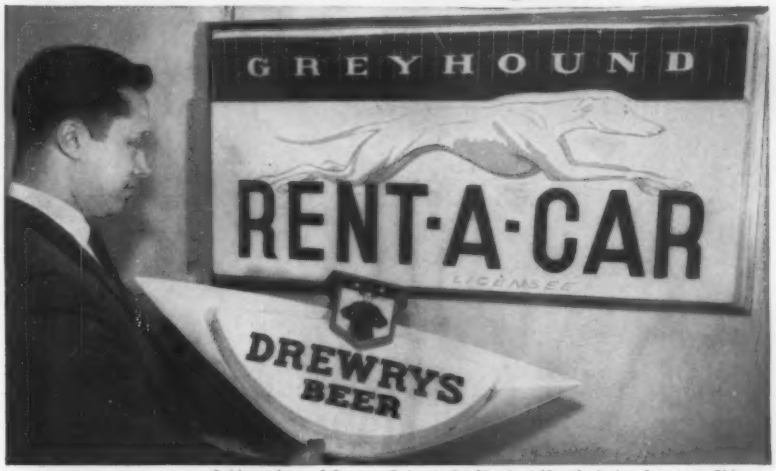
materials, vacuum formed the handsome freezer cabinet in two pieces from Campco S-540, Rubber Modified Styrene Sheet; selected this particular Campco plastic for its excellent thermal and forming properties. The bottom section alone, with base dimensions of 48″x60″, required a complex deep draw of 30″—accomplished easily using .187″ thick Campco sheet. Best of all, the material's dimensional stability in forming and high-impact strength after, assured a cabinet that would withstand tough super market usage.

Particularly valuable to Dimensional Products Inc. were the fine surface characteristics of Campco S-540. Using a PM finish sheet which has a polished smooth surface on one side—mat on the other, they were assured exact uniformity from sheet to sheet . . . repeatability of product after forming.

Campco S-540 is completely adaptable for printing by any of the commonly recognized processes—letterpress, offset and silk screening. Special inks are of course required to insure effective bond. Decal transfers are easily applied. The combination of printing with forming make the sheet ideal for advertising signs, colorful containers, and unique 3-dimensional displays. The approved method is to print flat on the Campco sheet, then form and trim to shape.

Available in full range of colors, translucent and opaque from .01″ to .187″ thick, stock and custom sheets.

Campco Butyrate scores in weather tests, opens new vistas in outdoor signs



Outdoor signs of Campco Butyrate by Standard Manufacturing Company, Chicago

Colorful outdoor plastic signs that can withstand weather hazards without becoming brittle or losing their brilliance are now possible with a special Campco Butyrate sheet. Made from resin supplied by Eastman Chemical Products, Inc., Campco Butyrate is tough, durable, easy to form, and completely weather resistant.

Weather-test results at Arizona checking stations assure the resistance of Campco Butyrate to extremes of sunlight, rain, heat, cold, snow and wind. Moreover, its surface resists dirt build-up and washes clean in rain.

Because Campco Butyrate is strong and resilient even in thin sections, substantial savings can be effected in its application for outdoor signs. A little goes a long way. Its ease of forming opens unlimited design opportunity—imaginative shapes . . . new vistas in outdoor signs.

Campco Butyrate is available in clear crystal or a variety of colors—rolls and sheets in thicknesses .005″ to .125″ stock or custom size. Clarity ranges from transparent through translucent to opaque.

It's easy to decorate by either lacquer or silk-screening. Attractive combinations of bright trademarks, slogans or other wording against colored or clear background are easy to achieve.

Campco Woodgrain Sheet sells "A'lure"

Handsome counter displays of Campco Woodgrain finish plastic sheet are helping to sell Warner Brothers "A'lure" bras in apparel stores throughout the country. This new Campco sheet looks like solid wood but is light as a feather, and has all the excellent qualities of standard Campco sheet . . . high impact resistance, dimensional stability and outstanding formability. Available in cut-to-size and standard sheets from .040″ to .187″ thick.

Received Your Campco Personal File? This data-packed reference file on thermo-plastic sheet and film is yours on request—just send name and address on Company letterhead to Campco, 2708 Normandy Avenue, Chicago 35, Illinois.

CAMPCO Sheet and Film, **a Division of Chicago Molded Products Corp.**

products of many shapes . . .
and many sizes can now be

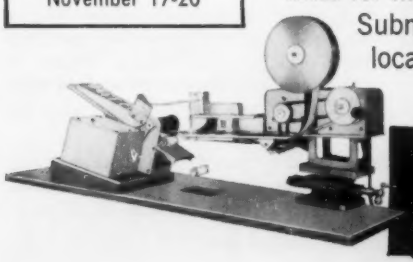
LABELED AUTOMATICALLY by

DERBY DISPENS-A-PLY PRODUCT LABELER

See The
Complete DERBY Line
at the
P.M.M.I. Show
Booth No. 214
N. Y. COLISEUM
November 17-20

Now pressure-sensitive labels can be dispensed, registered and applied to most products in a wink. Illustrated is a Derby Dispens-A-Ply Product Labeler applying pressure-sensitive labels to bottle caps at a rate of up to 150 per minute.

For a faster, better, more economical product labeling operation, write for more information about Derby's revolutionary Dispens-A-Ply. Submit sample of product or product description, sample of label, location of application and other pertinent details.



DERBY SEALERS, Inc.
DERBY, CONNECTICUT

WHY CONVERTERS BUY MORE

INTA-ROTO LAMINATORS

THAN ALL OTHERS COMBINED

For Foil, Film, Paper, or Paperboard Lamination

1 Inta-Roto laminators are precision machines, and precision equipment is a must for sustained high speed lamination, for quality lamination, and for laminated materials that can be processed further on other high speed machines.

2 Constant, accurate maintenance of proper tensions, plus precision in adhesive application, give Inta-Roto laminators production speeds of 1000 feet per minute, with full quality control.

3 Your Inta-Roto laminator is completely assembled at our plant before shipment, for a test run using your materials; and at this time we check your men out on the running of the machine.

4 Inta-Roto ships the complete machine. There are no parts to wait for from various points in the country. You can assemble it at once and thus get into production faster.

5 Inta-Roto offers independent machines for separate laminating operations, or in-line units for use with other equipment. Combination laminators are also available for laminating and coloring or coating in the same operation.

6 Inta-Roto laminators are built on the unit principle. By this method, the machine can be modified to meet added requirements of production and other units may be added at a later date.

7 Inta-Roto laminators are designed for laminating with aqueous or solvent type adhesives or with hot melts.

8 Although Inta-Roto makes equipment for the giants of industry, it gives every bit as much attention to the detailed needs of the smallest converter.

Visit us at Booth 1208

INTA-ROTO
MACHINE COMPANY, INC.
P. O. Box 454, Byrd Airport, Richmond 3, Va.
Telephone: REpublic 7-4181
Manufacturers of rotogravure presses, laminators, slitters, rewinders and other precision machinery for the converter.

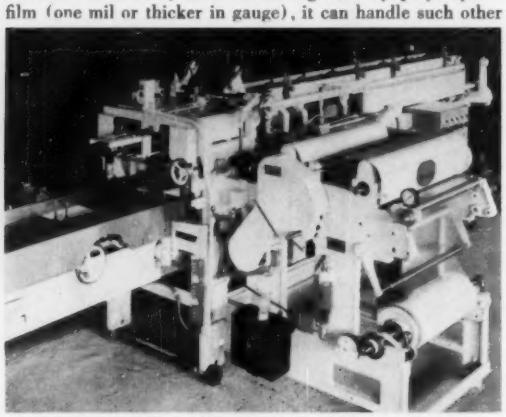
Equipment & Materials

A MODERN PACKAGING editorial feature

On Nov. 17, the Packaging Machinery Mfrs. Institute Show begins a four-day run at the New York Coliseum. As it has in the past, this show brings new developments in machinery and materials which can be applied by packagers in a broad range of product fields. Much of the equipment described below will be seen for the first time at the PMMI Show. Wherever possible, items that will be exhibited there are so identified.

Fast, versatile soft-film wrapper

A versatile new film-wrapping machine which can apply both end-fold and under-fold seals, and can attain wrapping speeds of 65 to 70 packages per minute, will be displayed at the PMMI Show this month by Battle Creek Packaging Machines. The company's new unit is called the Model 475S. In addition to low-, medium- or high-density polyethylene film (one mil or thicker in gauge), it can handle such other



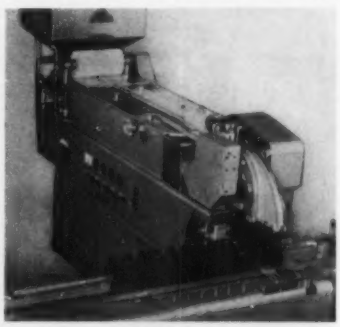
soft films as polyvinyl chloride, polypropylene and polyester film. The fact that the machine can apply either end-fold or under-fold seals, says the supplier, means that thin items (down to ¼ in. thick) or bulky items (up to 4 in. thick) can be wrapped with equal facility. Items to be wrapped can range from 5 to 12½ in. long and 3 to 8½ in. wide. A feature of the unit is a perforation attachment to provide easy opening for soft film packages. The score can be across the web or in the direction of unwind, as desired. Other cited features include (1) a "Thermo-Pad" heat-sealing system for weld sealing of soft films, equipped with a refrigeration device for immediate film quenching after heat application and with electronic heat controls for accurate control of sealing temperature, and (2) a film feeding and cutting system that gently positions the film over the package to be wrapped, and is equipped with static eliminators. *Battle Creek Packaging Machines, Inc., Battle Creek, Mich.*

Sealing and capping combinations

Two high-speed sealing and capping lines for food, drug, beverage and other liquid-product containers will be demonstrated at the PMMI Show this month by Resina. The conveyor-fed combinations are claimed to operate with minimum supervision under full production. One of the automatic lines includes the Model CIS innersealer and the Model RS screw capper. Operating at a reported speed of up to 60 units per minute, it is designed for use with such products as industrial and consumer automotive oils and lubricants. Straight-line construction minimizes change-over time and variable-speed drive permits set-up in any type of packaging line, says the company. The second available line is claimed to operate at speeds up to 200 units per minute, depending on fitment and container. A fitment applicator places solid or perforated plastic fitments, with or without lift tabs. A screw capper completes the operation. *Resina Automatic Machinery Co., 572 Smith St., Brooklyn 31.*

Electronic tablet counter and filler

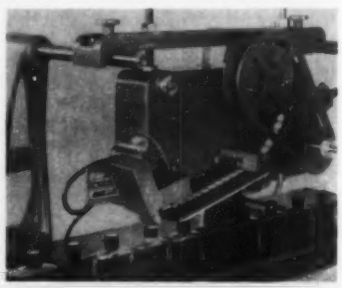
A new electronic counting machine that counts and fills tablets and capsules regardless of shape or size will be displayed at the PMMI Show this month by Lakso. The latest addition to the supplier's line of pharmaceutical packaging equipment utilizes an electronic photohead counting unit. It is adjustable for counts up to 10,000. The machine is equipped with an automatic bottle - handling conveyor that is adjustable for containers ranging in



size from sample vials to bulk-count bottles. Other machines to be displayed by the company are the Model 52 automatic cottoner and the Model 56 inspection machine. The former automatically inserts cotton or rayon wadding into bottles of tablets at speeds up to 100 bottles per minute. Portable, it can be supplied with or without conveyor. The latter machine requires the services of just one operator for fast examination of both sides of tablets before they are bottled. It has a capacity of 1,500,000 tablets per working day, says the supplier. *The Lakso Co., Fitchburg, Mass.*

Automatic label dispensing and marking

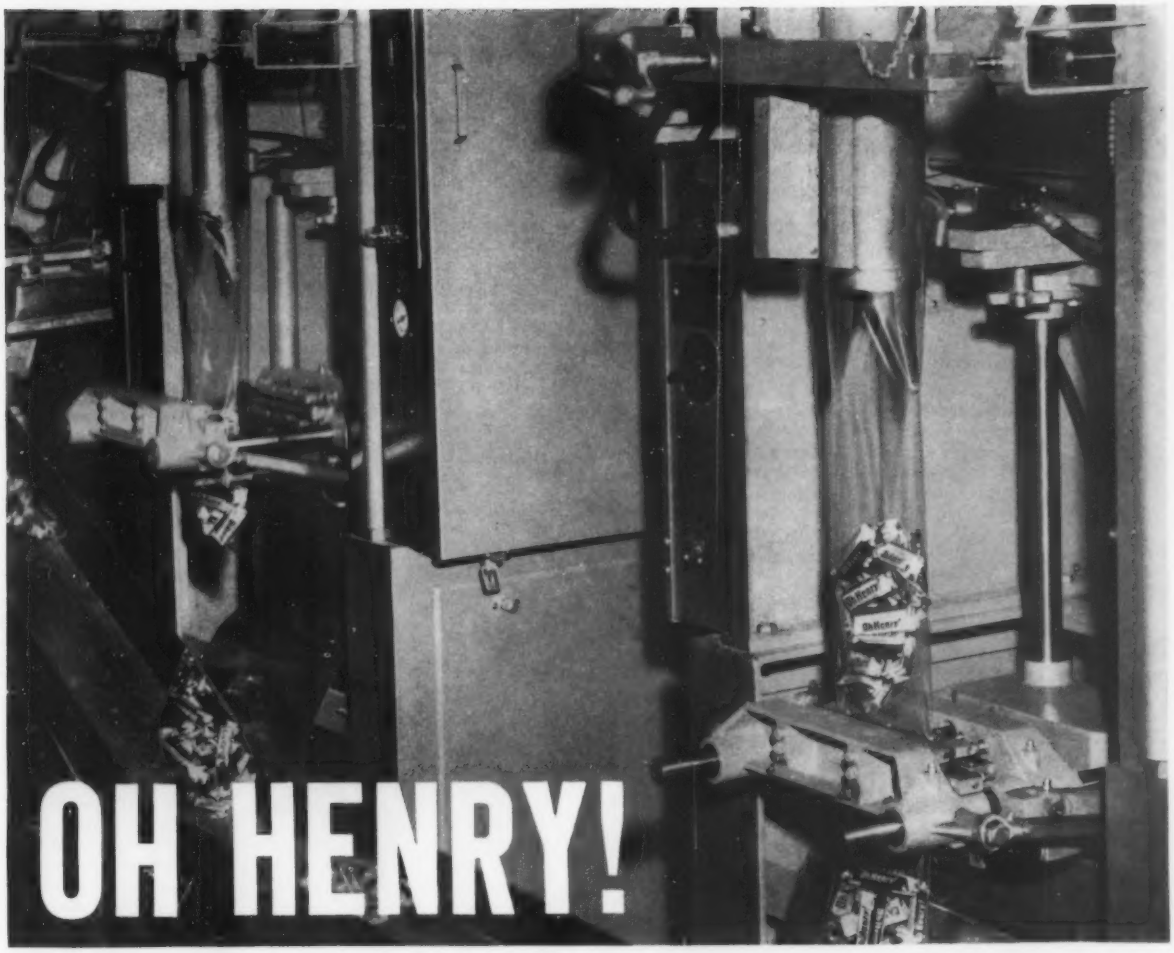
At the PMMI Show this month, Derby Sealers will introduce its newly improved Dispens-A-Ply automatic labeling machine. In operation, the machine removes pressure-sensitive labels from a roll of backing paper, then applies them directly to objects of varying sizes and shapes—such as blank bottle caps, jars, cans, pre-wrapped packages and similar items. A fully adjustable head mechanism can be raised or lowered



as required. The labeler's new head will dispense labels up to 3¼ in. wide at speeds which depend on label length. Another improvement is a coding attachment which marks price information, size data, etc. on the labels as they are dispensed. *Derby Sealers, Inc., Derby, Conn.*

Twist wrapper for candy and tablets

Package Machinery Co. will introduce a new high-speed twist-wrapping machine for candy and tablets at the PMMI Show this month. The machine is made by Forgrove Machinery Co., Leeds, England. Speeds of up to 500 wraps per minute can be attained on the new Model 85, says its supplier. Machine operation is fully automatic. Items to be



"...packages better for less *automatically*...with VisQueen FILM

"Comparison tests proved to us: 'VISQUEEN' polyethylene film is the film to use *when we want to get all the cost savings made possible* by automatic packaging.

"For instance: VISQUEEN film's superior uniformity of thickness—with no thin, weak spots—gives us a stronger film. Breakage and consequent downtime are eliminated. We get maximum machine speeds when packaging our Oh Henry Miniatures.

"Smooth, wrinkle-free winding also makes VISQUEEN film the ideal polyethylene for smooth, trouble-free operation of automatic packaging machines.

"Cost-wise, you'd expect that this superior quality polyethylene would be higher. Actually, VISQUEEN film costs less in the end than 'cheaper' films, for two reasons: We get superior machinability and, because of its superior strength, we can use the most economical gauges of VISQUEEN film.

"In-store breakage is negligible, thanks to the high impact strength of this material, and clarity is superb."

B. J. Redding
Purchasing Agent

NOTE: *VISQUEEN film is specially formulated and manufactured for the needs of the candy manufacturer. VISQUEEN film is the polyethylene that's quality controlled for uniform thickness from basic resins to finished product. VISQUEEN film is a product of pioneer polyethylene producers.*

Automatically—it's VISQUEEN film!

PLASTICS DIVISION
6733 W. 65th St., Chicago 38, Illinois, Dept. H11
In Canada: VISKING COMPANY DIVISION OF UNION CARBIDE CANADA LIMITED, Lindsay, Ontario.
VISKING, VISQUEEN and UNION CARBIDE are registered trademarks of Union Carbide Corporation.

VISKING COMPANY UNION CARBIDE

wrapped are fed from a hopper into a 45-division feed disk. Continuously revolving twisters wrap the products neatly and tightly. Twist heads are adjustable to handle various lengths of candy. Length of wrapping-material cutoff is varied by change gears. Change-over from one size of product to another is reported to take only 15 minutes. Two reels of wrapping material can be mounted on the machine, to facilitate changing from one reel to another or running an outer wrapper and an understrip together. *Package Machinery Co., East Longmeadow, Mass.*

Twin-web side-weld bag maker

The Simplex plant of FMC reports the availability of its new Model 210 side-weld bag-making machine. The unit, which features twin folding unwinds and split draw rolls, will be exhibited at the PMMI Show this month. The machine will manufacture side-weld bags from two separate printed webs at reported production speeds of 170 to 220 bags per minute. A new Simplex stacker assures accurate stacking of bags, says the firm. *FMC Packaging Machinery Div., Simplex Plant, 534 23rd Ave., Oakland 6, Calif.*

Semi-automatic aerosol line

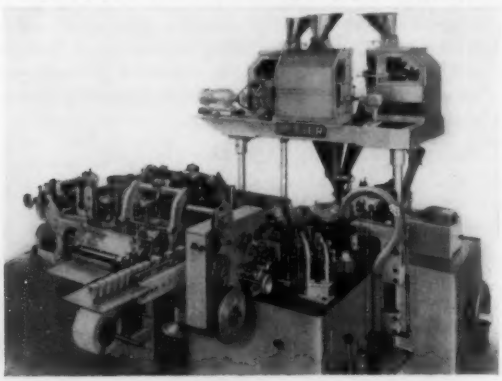
Kartridg-Pak will show a new, low-cost, semi-automatic aerosol-packaging line at the PMMI Show this month. The new line, designated KP-1000, is a self-contained unit. It is capable of producing up to 600 cans per hour, says the supplier. Designed primarily for small-volume manufacturers or processors, the line consists of a piston filler, a vacuum crimper and a pressure filler (0 to 300 gm.). Citing the line's low cost, the supplier says cost figures of three to four cents a can can be obtained, even if the equipment is amortized over a period of only five years. *Kartridg-Pak Co., Franklin Park, Ill.*

Three-roll coating and waxing unit

A special chilling section is a feature of the new three-roll coating and waxing machine which will be demonstrated by Potdevin at the PMMI Show this month. Because it operates at extremely low temperatures, the unit's cooling system provides instantaneous cooling, says the supplier. The machine will accommodate webs up to 30 in. wide. It is suitable for coating one or both sides of kraft, glassine and other types of paper with wax, hot melts or combinations of waxes and hot melts. It is also adaptable for laminating two or three webs. *Potdevin Machine Co., Teterboro, N.J.*

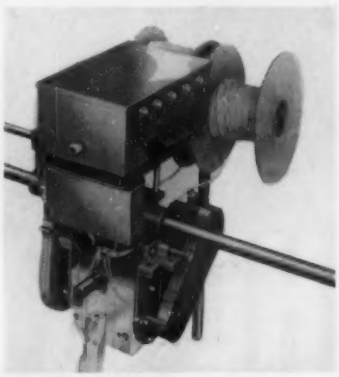
New coffee bag and packaging machine

Fr. Hesser, West German packaging-machinery manufacturer, has developed a reclosable bag for coffee beans that are ground at retail and then repackaged in the same bag, and also has developed an automatic packaging machine for the new bag. The new double-walled bag consists of an inner lining of paper and an outer lining of paper-backed aluminum foil. Its top folds down flat and is closed by a strip of pressure-sensitive tape. The tape then is covered with a heat-sealed label. Advantages of the bag, according to the company, are that it prevents product pilferage on store shelves, presents a neat appearance, stacks well and can be reclosed in the home without damage that could cause flavor loss. The new machine, which will be demonstrated at the PMMI Show this month, forms, fills, tapes and labels the bag. The supplier reports that the machine, equipped with three weigh scales, will operate at 60 bags per minute; with four weigh scales speed is 65 to 70 bags per minute. In developing the new coffee bag and packaging machine, the company says, several material modifications were necessary. The aluminum-foil lining, for instance, had to be thinner so that the rolled-down closure would not be too thick. Also, it was necessary to develop a label that could be firmly heat sealed in less than ½ second. *Fr. Hesser Maschinenfabrik A.G., Stuttgart-Bad Cannstatt, W. Germany.*



Improved hot-melt-adhesive applicator

Bonding of wider seams and of multiple seams—even on hard-to-stick materials processed in continuous form and at increased web speeds—is possible with the use of Thermogrip hot-melt adhesive and a new Thermogrip applicator, claims United Shoe Machinery. The new applicator machine, Model BN, simultaneously feeds the cord-like adhesive from two reels, thereby affording increased melting and dispensing capacity. It will be demonstrated at the PMMI Show this month. According to the company, primary usage of the new unit is expected on converting equipment where adhesive bonding of continuously moving materials must be achieved under demanding requirements. The applicator will apply up to ½ lb. of adhesive per minute, depending on the formulation used. Among the materials on which the new applicator is reported to apply adhesive effectively are metallic foils and polyethylene film, coatings and laminations. At the PMMI Show, the supplier also will introduce a new system for multiwall-bag closing, using Thermogrip adhesive and newly designed equipment. The company says the system will produce a superior and economical tape-over-sewn closure. *United Shoe Machinery Corp., 140 Federal St., Boston 7.*



Product packaging in pillow bags

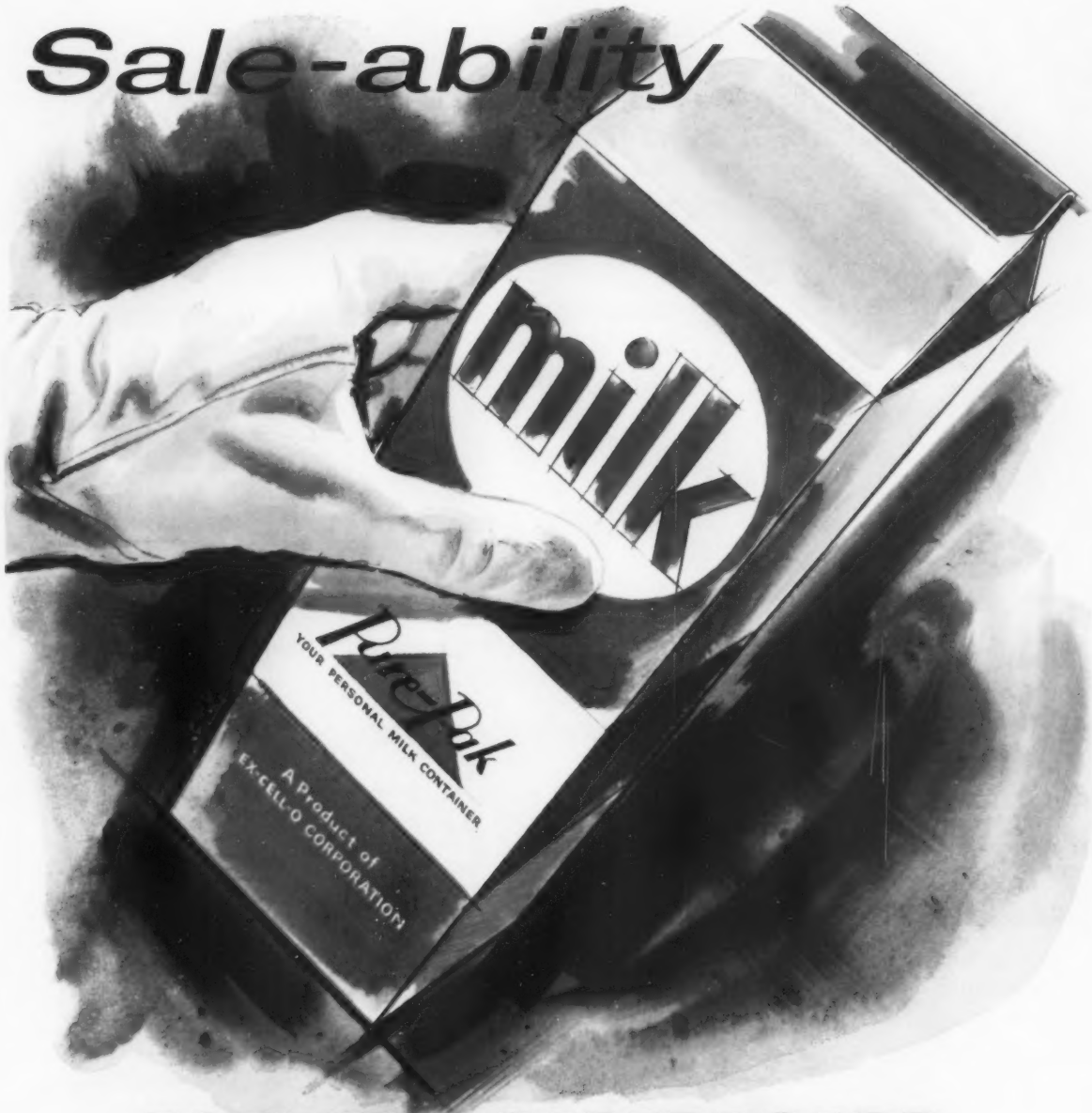
Forming, weighing, filling and sealing of pillow-type bags can be accomplished on Wright Machinery's Advanced Bagmaster, which will be demonstrated at the PMMI Show this month. The machine packages a wide range of products, including such fragile items as potato chips. Single- or double-walled bags can be produced from rolls of plain or printed stock. Bag size ranges from 2½ to 8 in. wide and 3 to 14 in. long. Packaging speed can be as high as 50 bags per minute, depending on the product, says the supplier. *Wright Machinery Co., Div. Sperry Rand Corp., Durham, N.C.*

New liquid-filling machines

Packer Machinery reports the availability of two newly redesigned liquid-filling machines. Both will be shown at the PMMI Show this month. The two new machines are: the Model PVA automatic straight-line vacuum liquid filler and the Model PJ-1 Junior, a semi-automatic machine designed for use by packagers filling containers no larger than one

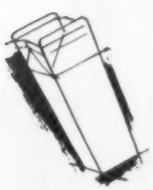
[*Continued on page 206*]

Sale-ability



POTLATCH PAPERBOARD

Here's paperboard with *ability!* Print-*ability!* sale-*ability!* Your order is CUSTOM-TAILORED to meet any specifications! For superior quality . . . finest service . . . look to Potlatch, the company with "ABILITY"!



POTLATCH FORESTS INC.
PAPERBOARD DIVISION—GENERAL OFFICES—LEWISTON, IDAHO

pfi

THE COMPANY WITH "ABILITY"

THE NEW YORK COLISEUM

Nov. 17 through Nov. 20—P.M.M.I. Show—Booth 816
Nov. 30 through Dec. 4—Exposition Chemical Industries—Booth 50

COLTON

Finest tablet presses, punches and dies, granulators, mixers, ovens, special machinery. Leading specialist in accurate small-fill equipment for high production filling of any containers, and filling and sealing metal and plastic tubes.

COLTON-HOPE

Most versatile machines for accurate, high-speed filling of high and low viscosity products into a wide range of containers.

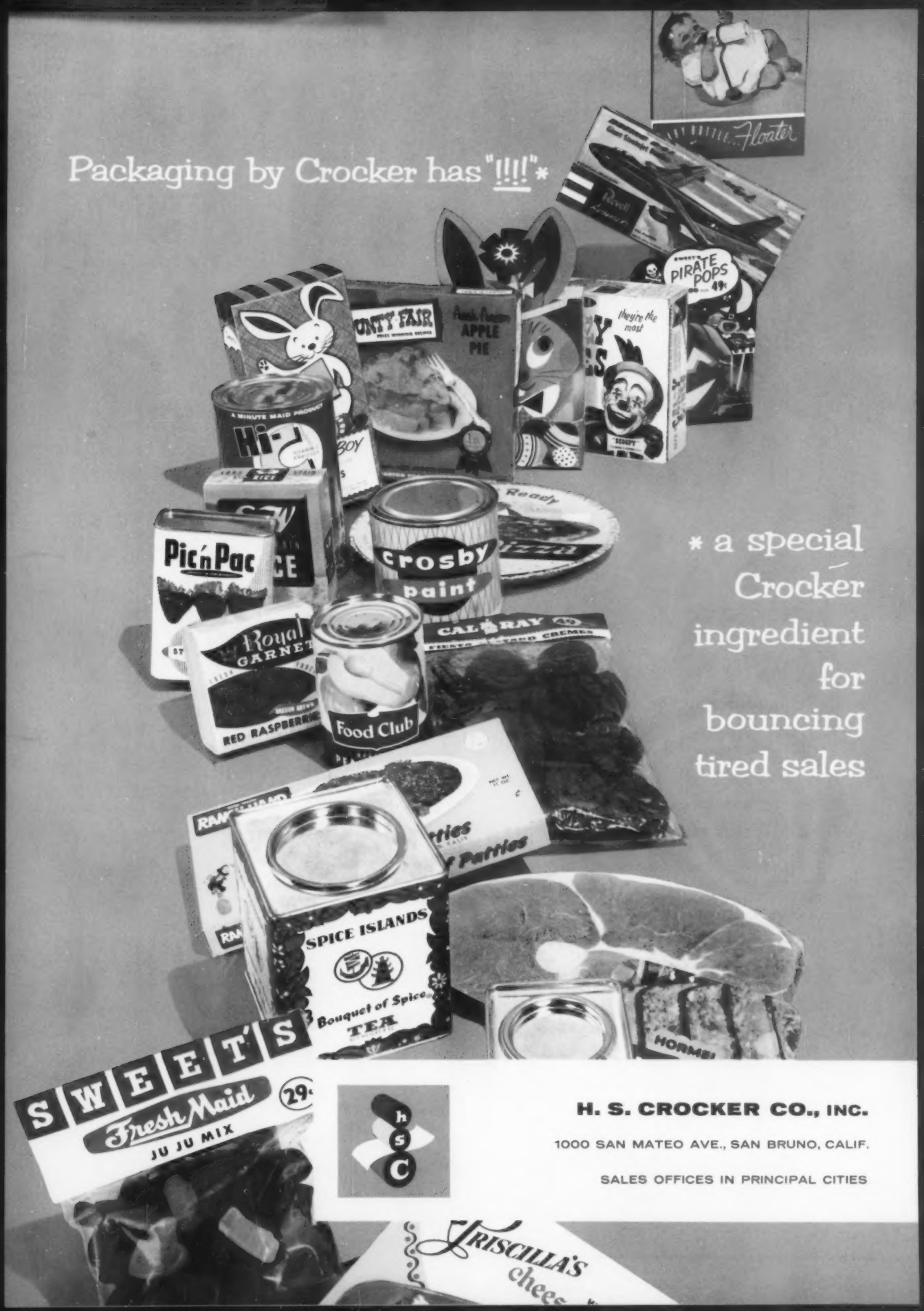
COLTON-*Alpha*

Finest aerosol engineering in the newest, simplest, completely coordinated equipment for high or limited production.

ARTHUR COLTON COMPANY

Detroit, Michigan
Established 1884

WORLD'S MOST COMPLETE LINE OF FILLING AND SEALING EQUIPMENT


Packaging by Crocker has "!!!"*
* a special Crocker ingredient for bouncing tired sales
Floater
PIRATE POPS
COUNTY FAIR
APPLE PIE
Hi-C
Pic'n Pac
crosby paint
Royal GARNET
RED RASPBERRIES
Food Club
CALIFRAY
SPICE ISLANDS
Bouquet of Spice
TEA
SWEET'S
Fresh Maid
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29¢
H. S. CROCKER CO., INC.
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SALES OFFICES IN PRINCIPAL CITIES

SEALED IN ALCOHOL, sterile sutures stay sealed for as long as 3 years in envelopes of "Scotchpak" Brand Heat-Sealable Polyester Film. Paks can be stripped open easily in the operating room—and there's no danger from broken glass.

"SCOTCHPAK" TAKES OVER

...streamlines a multitude of packaging jobs!

Looking for a film that's *tough*, clear as glass—one you can freeze or boil? And would you like that same film to be heat-sealable with a seal that's as tough as the film itself? Then your answer is "Scotchpak".

Here is a film that combines the best features of many films. It can be heat-sealed in less than 2 seconds—a temperature of 300° to 400° F. and 20-60 psi is all that's required.

"Scotchpak" Film resists freezing cold (down to -70°F.) and boiling heat (up to 240°F!). It resists acids, oils, alkalies and organic solvents. It is light (saves shipping costs!) and compact (saves space in shipping and on the shelf, too!).

"Scotchpak" is now available in roll-stock widths up 50 inches—from 2 mils to 4.5 mils thick, ready for printing—if you desire. It can be easily handled on conventional bag making and filling equipment.

Our Customer Service organization is ready to work with you—to show you how "Scotchpak" can solve your film fabrication and packaging problems. For complete information, write Film Products Group, Dept.CAK-119,3M Company, St. Paul 6, Minnesota.

SCOTCHPAK BRAND

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SCOTCHPAK® BRAND HEAT-SEALABLE POLYESTER FILM

SCOTCHPAK BRAND

"SCOTCHPAK" IS A REGISTERED TRADEMARK FOR THE HEAT-SEALABLE POLYESTER FILM OF 3M CO., ST. PAUL 6, MINN. EXPORT: 99 PARK AVE., NEW YORK 16. CANADA: LONDON, ONTARIO

MINNESOTA MINING AND MANUFACTURING COMPANY

...WHERE RESEARCH IS THE KEY TO TOMORROW

3M COMPANY

INSECTICIDES

PACK A LETHAL SALES PUNCH IN AEROSOL CANS BY CONTINENTAL

Insecticides are deadlier than ever, and insecticide sales prove it. Responsible for this new selling surge is the aerosol can, more convenient and more efficient. Of the more than 41 million cans sold in 1957, Continental supplied a large part. It was Continental, remember, who developed the low pressure aerosol that started this fabulous market on its way. For your insecticide, you can't do better than a superbly lithographed Continental aerosol. Because of its experience, Continental is able to produce aerosols at a most economical price . . . and give you the widest selection in size and style. Greatly expanded production facilities assure you of fast delivery wherever you're located. Research and engineering services are also available. Call Continental today.

CONTINENTAL CAN COMPANY

Eastern Division: 100 E. 42nd St., New York 17
Central Division: 135 So. La Salle St., Chicago 3
Pacific Division: Russ Building, San Francisco 4
Canadian Division: 790 Bay Street, Toronto, Ont.

CONTINENTAL MAKES AEROSOLS FOR EVERY USE . . . IN THE WIDEST RANGE OF SIZES

PAINT HAIR SPRAY SPRAY BANDAGES FRAGRANCE DEODORANT SHAVING CREAM SHOE POLISH ANTISEPTIC

The Heat's On

precisely . . . under the dependable control of Fenwal Standard Thermoswitch® Units

Key step in the manufacture of milk cartons on Pure-Pak carton-forming machines is the heat-sealing of the bottom flaps. For eight years this manufacturer has used Fenwal Series 17000 THERMOSWITCH units for temperature control of this vital operation. Result: eight years of precise troublefree control. *That's time-tested performance!*

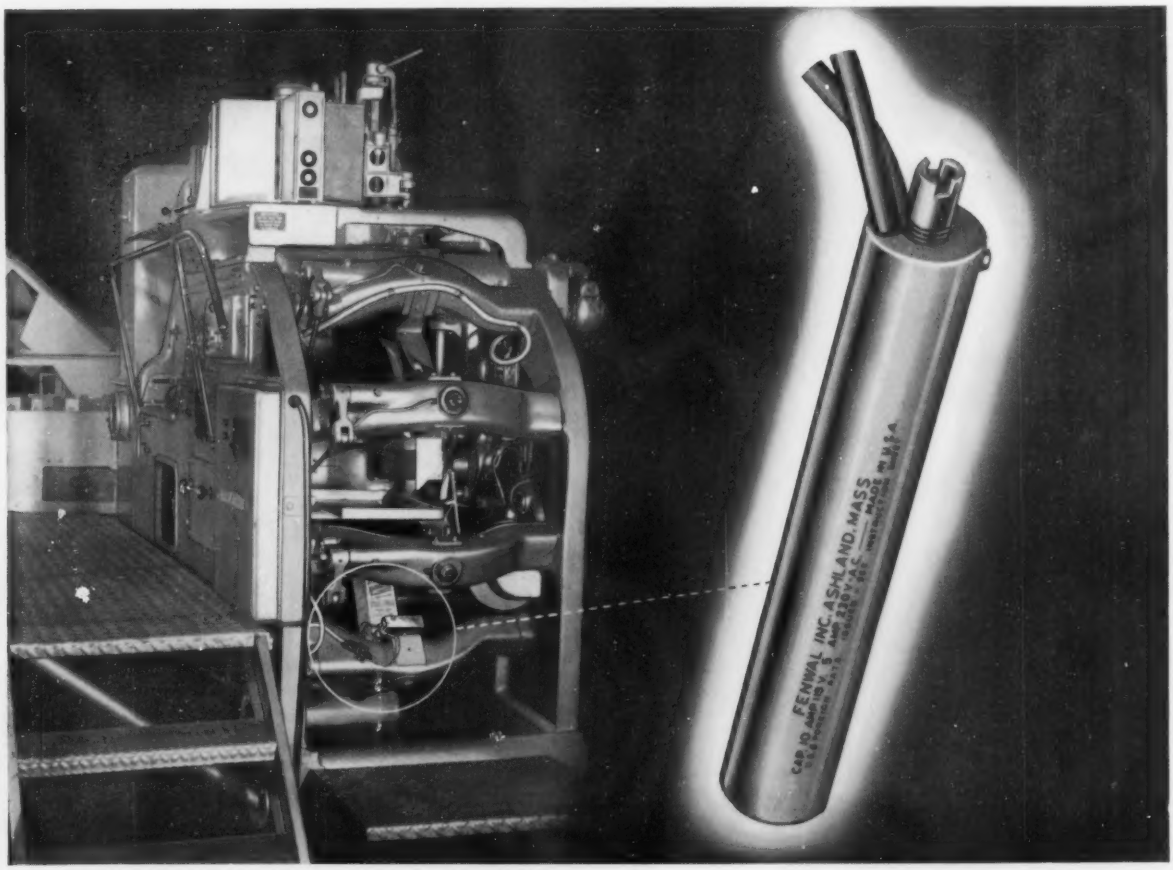
It's typical of the hundreds of successful installations of immersion and surface-mounted THERMOSWITCH units . . . in tanks, vats, air ducts . . . for widely varying space and position requirements . . . under the severest conditions of shock, vibration, and corrosion. *They're standard units with truly special capabilities!*

Yet for all their ruggedness, THERMOSWITCH units are sensitive to temperature changes of only a fraction of a degree. Heat sensitive outer shell responds instantly and accurately. *No thermal lag . . . no control error!*

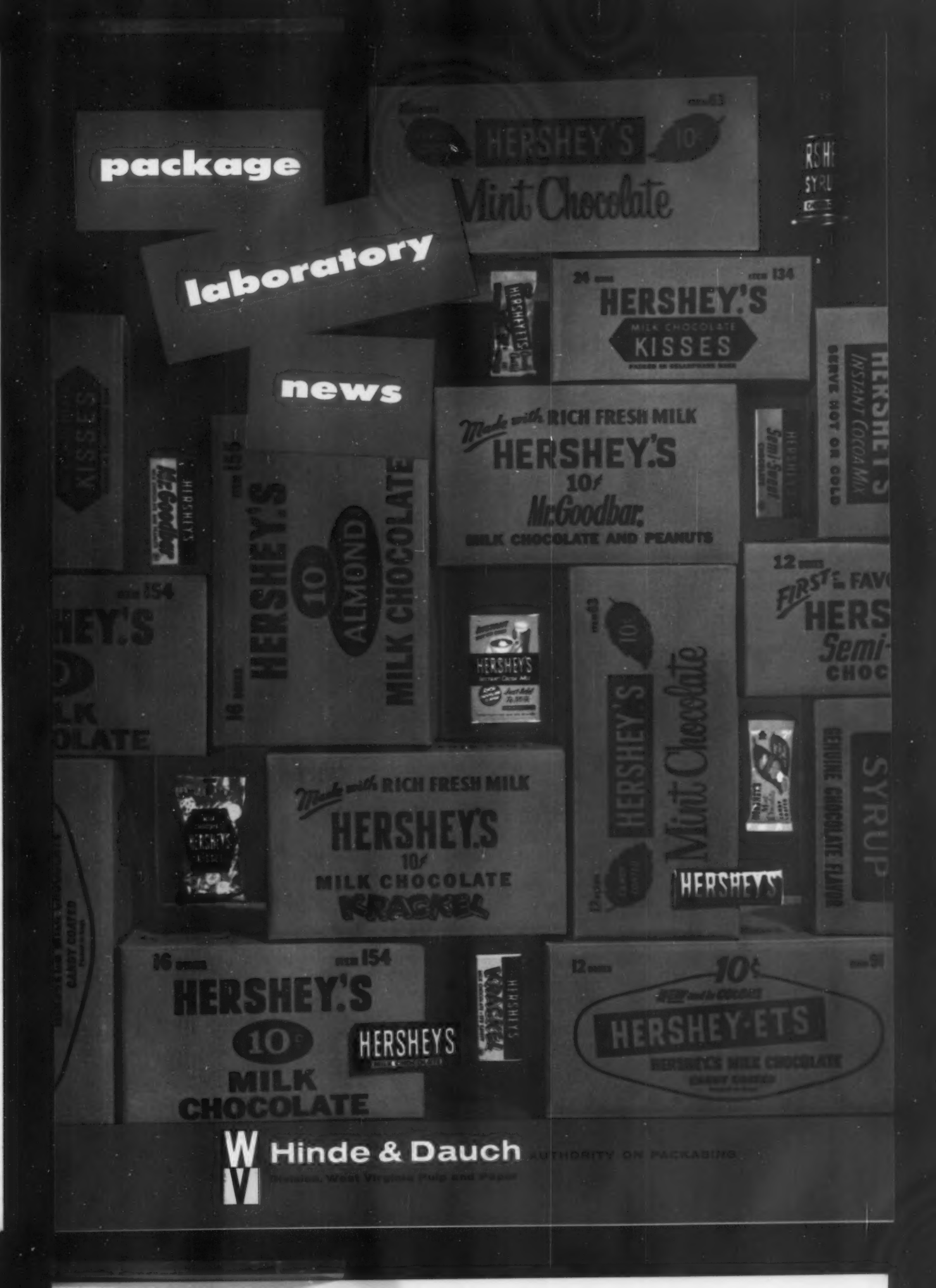
Use these versatile units for control applications from −100 to +1100°F. They're completely adjustable with current ratings up to 10A-115VAC.

For complete details, write Fenwal Incorporated, 73 Pleasant Street, Ashland, Mass.

Compact, totally-enclosed Fenwal THERMOSWITCH units provide positive, service-free control of heat-sealing operation on this Pure-Pak carton-forming machine.



ANOTHER EXAMPLE OF HOW **Fenwal** CONTROLS TEMPERATURE . . . PRECISELY


package
laboratory
news
HERSHEY'S
Mint Chocolate
HERSHEY'S
KISSES
Made with RICH FRESH MILK
HERSHEY'S
Mr. Goodbar
MILK CHOCOLATE AND PEANUTS
HERSHEY'S
ALMOND
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Made with RICH FRESH MILK
HERSHEY'S
MILK CHOCOLATE
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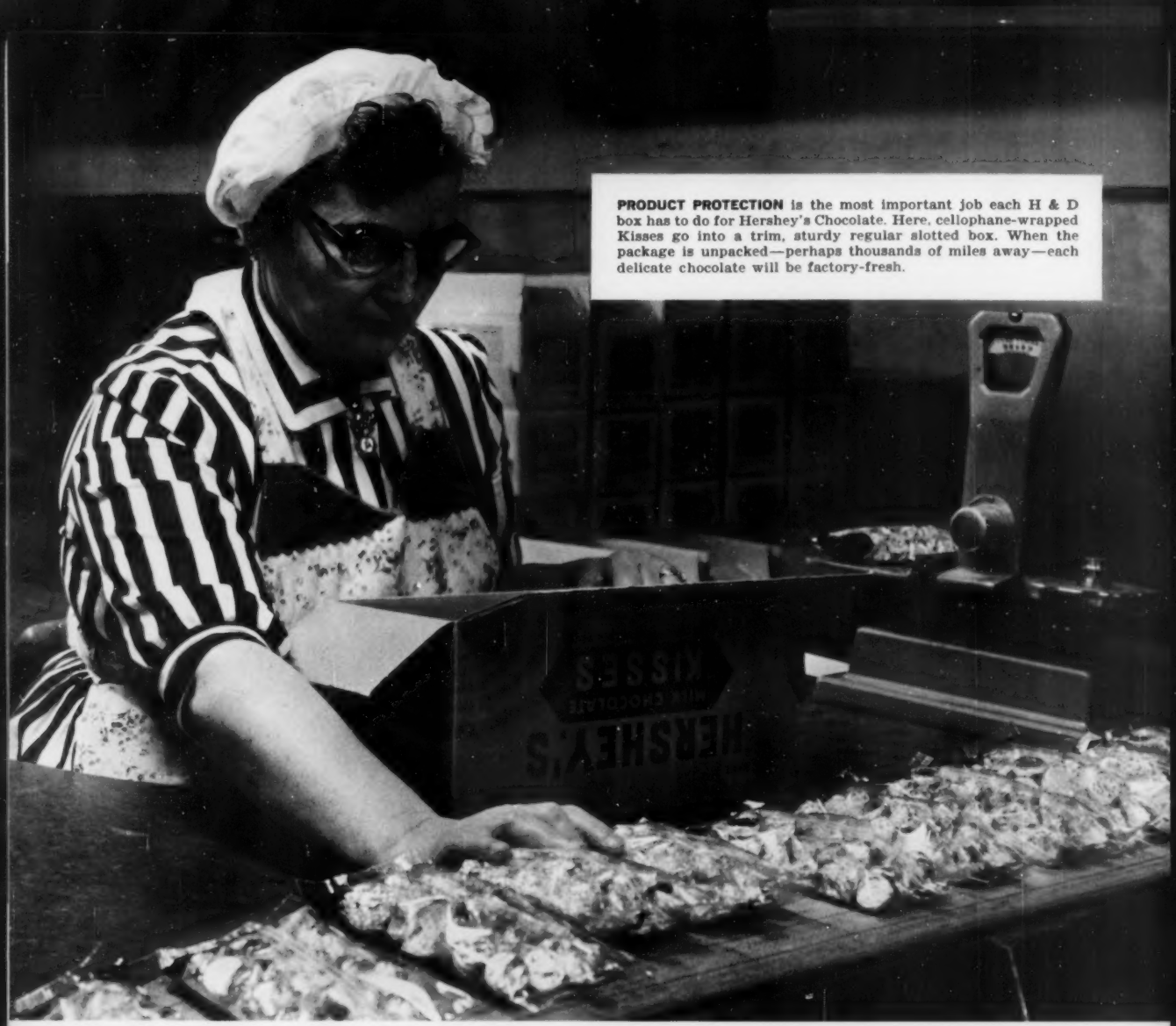
HERSHEY'S MILK CHOCOLATE
SYRUP
GENUINE CHOCOLATE FLAVOR
Hinde & Dauch



PRODUCT PROTECTION is the most important job each H & D box has to do for Hershey's Chocolate. Here, cellophane-wrapped Kisses go into a trim, sturdy regular slotted box. When the package is unpacked—perhaps thousands of miles away—each delicate chocolate will be factory-fresh.

HERSHEY ...volume user of the versatile regular slotted corrugated box

Package Laboratory News

Hinde & Dauch Division of West Virginia Pulp and Paper Company, Sandusky, Ohio.

FACTORIES IN: Baltimore Buffalo • Chicago • Cleveland Detroit • Eaton, Ohio • Gastonia, N. C. • Gloucester City, N. J. • Hoboken, N. J. • Kansas City, Kans. • Meriden, Conn. Richmond, Va. • Sandusky, Ohio St. Louis • Watertown, Mass.

ON THE COVER—Hershey's tempts the nation's sweet tooth with a variety of chocolate delights—shipped in H & D corrugated boxes.

If there's one name in America that *everyone* knows—from the toddling tot to the retired banker—it's Hershey's Chocolate. This astonishingly successful corporation makes delicious chocolate in quantities that stagger the imagination, then ships it in regular slotted boxes that move through the packing lines in carload quantities—every day.

Whether the interior package is a can, a bag or a box, the versatile regular slotted box, each with its own printing design and precise dimensions, carries the product from the company's Hershey, Pennsylvania plant to every corner of the country.

Why does Hershey rely on H & D for volume production of its corrugated requirements? The answer is easy to find in these photos of some of Hershey's production lines . . .

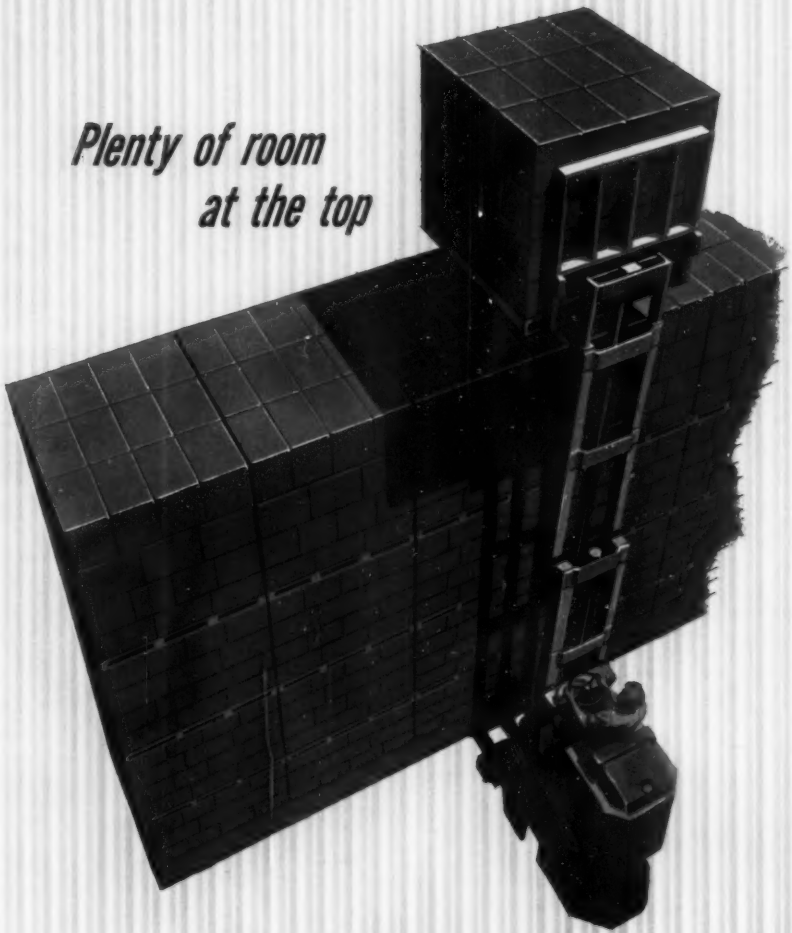
STORAGE SPACE is vital in Hershey's busy plant. They receive H & D corrugated boxes knocked-down and bundled. Set-up takes only a second.

PACKING goes smoothly and quickly on Hershey's modern assembly lines. Here, an automatic machine and one employee fill boxes with containers of Hershey's famous Cocoa. H & D quality control keeps every box dimension precise.

DESIGN of all Hershey's H & D corrugated boxes is basically the same: regular slotted. Variations of size in this standard style are created to suit each of the company's products whether the interior package is a can, a bag, or a box.

PRINTING like this clean, handsome design tells the quality story of Hershey's to everyone who sees the box. Colors are warm and rich, in keeping with the product's personality, and always meet strict standards established by Hershey for its famous maroon color.

Plenty of room at the top



Filling your warehouse space to the limit? Hinde & Dauch corrugated boxes stack high and straight. Need better top-to-bottom protection for your product? Better see H & D.

Hinde & Dauch

Division, West Virginia Pulp and Paper

AUTHORITY ON CORRUGATED PACKAGING • SANDUSKY, OHIO
15 FACTORIES • 42 SALES OFFICES

Sounding Board

WE ASK THE READERS

Are retailers a productive source of packaging ideas?

J. Russell Wood
Director, Home Product Sales
Dixie Cup Div.
American Can Co.
Easton, Pa.

Retailers are even more than a productive source of packaging ideas—they are indispensable. Dixie Cup and thousands of other firms must have packages to meet the exacting requirements of today's supermarket.

Retail outlets have packages in all shapes and colors. This kaleidoscopic array can camouflage your package unless your design is truly distinctive. Standing alone, it may be terrific; placed on the shelves with others, it may merely blend into the background.

Most retailers agree that a package sold in modern stores must do three things if it is to be successful:

1. Attract consumer attention, for if the consumer doesn't see it she isn't going to buy it.
2. Tell the product story quickly: If the consumer can't tell instantly what is in the package she will not bother to investigate.
3. Look different from competitive brands, or the sale you build with your advertising may be lost.

The danger that manufacturers face is that, in trying to meet one or two of these three requirements, they may neglect the other. It is on that score that retailers are especially helpful. Packaging is an art, not a science—and expert opinion based on sales experience is invaluable.

New Dixie Cup packages are always shown to buyers and store managers before they are produced. Not only do we get the benefit of their years of practical experience, but they allow us to test our new packages on their shelves. This often results in major revision of the package design.

Without this valuable assistance there would be many more package failures—and a *package* failure usually means a *product* failure.

Carl C. Pence, *General Manager, Brownie Baking Co., Spokane:* The retailer is not a productive source of packaging ideas. To begin with, his No. 1 problem is his customer relations. His second problem is keeping the store well stocked with the best-selling brands. Whether a package is in a pink or a white container makes no difference to him if it sells. There are a few retailers who love to delve into the problems of their suppliers. Too often their ideas on packaging pertain to the unusual method they have in stocking merchandise, or to personal likes in colors.

The retailer can be of help if he will give factual information. New packing and new color schemes are hitting the shelves in droves. Make a list of a few items of about the same shape and size as your packaging problem. Have the retailer give you the actual turnover of each item. Check with him as to its sales position with other similar products. The leader in the field has put a twist into his color scheme, or the shape of his container. You want to get your own ideas into that package, but you do not want to go off the deep end. Knowing how successful a color scheme on a carton or package is will be a guide to your own ideas.

My experience in talking to retailers about packaging is the same as when my wife asks what dress she should buy. I'm lost, even though I will admire the successes. I think retailers are in the same position.

N. S. Clifton
General Manager of Plants
Permatex Co., Inc.
Huntington Station, N.Y.

Through avenues of suggestion and criticism, ideas reach us occasionally. As these avenues are fairly wide thoroughfares, most suggestions are from the layman's point of view and obviously do not consider cost or production problems. Nevertheless it is our practice to examine any suggestion or criticism passed on to us by our salesmen or wholesalers.

Our packaging and methods are under constant study; therefore we have a basis for comparison and can readily supply answers to the following analysis: (1) advantage to the customer, (2) volume of item in question, (3) equipment change necessary to handle and (4) cost difference (plus or minus).

If the composite answer to these basic points is favorable, we are justified in going on to a more-detailed examination. We must consider for example if the suggestion or criticism deals with a problem which is general or confined to a particular field. As we produce items for the automotive, aircraft, industrial and marine fields, this is a significant point. Further, the idea may be of prime importance in a limited area, but of no consequence elsewhere.

Our experience shows that the majority of successful

Sounding Board [*Continued*]

packaging ideas are the products of combined thinking and action within the organization.

The customer is our most important possession, so it follows naturally that it is our aim to keep him satisfied and pleased to do business with us. We would certainly do nothing to discourage the well-meant suggestion or constructive criticism, as they can be thought provoking and, occasionally, fruitful.

R. F. Holyoke
Assistant Advertising Manager
Andrew Jergens Co.
Cincinnati

In the packaging area, here are but a few of the many ways in which retailers can be most helpful: (1) They can provide current information regarding "deals," new packages, new products. (2) They are an excellent source of information in terms of space problems, facings for merchandise, specifications for point-of-sale material. (3) They provide excellent direction for pre-pricing of new and established products. (4) No one is in a better position to provide recommendations for nested packs to meet their distribution problems. (5) Retailers are the best source of information regarding the practicality of shipping corrugateds, particularly in terms of cut case corrugateds or corrugateds that convert into displays for store use. The regular shopping of retail outlets is valuable in that it exposes one to that which is new. Frequently such exposure stimulates ideas that ultimately prove the solution to one's packaging problems.

Roland S. Apfelbaum, Jr.
Sales Manager
Seaboard Seed Co.
Philadelphia

There is very little glamour in grass seed. But the product can be glamorized if it is attractively packaged.

About five years ago, our dealers complained that the package had little, if any, eye appeal—nothing to distinguish it from run-of-the-mill grass seed.

After a careful survey at the retail level, it was decided that we would package the product in a well-designed foil box. Acceptance of the new package was startling, with a quick, sharp sales increase.

All of our grass-seed products are now packaged in a family line of foil boxes. And sales continue up.

Retailers know, the better the box, the easier the sale.

Joseph E. Dwyer, *Purchasing Agent, Frozen Cooked Foods Div., The Stouffer Corp., Cleveland:* We consider retailers an excellent source of packaging ideas in certain realms. Theirs are the most important comments pertaining to storage both in the freezer cabinet and in the storeroom. Their opinions on pack size, instructions, durability of individual and master carton, and ease of opening of master carton are views that the average retailer is quick to pass on. Desirability of a price spot, its location and its functional use are most important answers obtained best from this source.

The acceptance of a new packaging idea, design or material can often be judged, at least partially so, from the consumer comments that the retailers acquaint the packer or processor with. Retailers both large and small can be an excellent sounding board for clarity of instructions and other copy detail. Trends in packaging can and are recognized by the retailer almost from the beginning. Rather than trying to obtain the vast number of consumer comments, the retailer can provide a summary.

Acceptance of a package begins at the production level and ends at the consumer level, but in between these two points lies the important retailer.

J. W. Simpson
Assistant Purchasing Agent
Wm. B. Reily & Co., Inc.
New Orleans

Yes, definitely. We always have a survey made before introducing a new-type container or package. Only recently we had a survey made to determine a design for a coffee canister we were ready to introduce in the South Louisiana area. We, of course, selected the most popular canister from the poll and it immediately met with tremendous success and resulted in making us re-evaluate our needs and almost double our first order. We are now trying to keep our stock at a satisfactory level, but our initial needs were definitely underestimated, I believe, solely due to the fine work of our fine selection of tested ideas by retailers.

Jerry Braff, *Sales Manager, Formaid Co., Boston:* Most assuredly. In our industry (brassieres) the packaging aspect is relatively new and Formaid, like our competitors, has to rely on a good deal of guesswork as to whether or not a particular type of package will be accepted in the stores.

For example, the original packages were sealed and the outside of the package had a beautiful illustration of the bra within, along with price and size information. However, we found, to our chagrin, that the average woman insisted upon opening the package, feeling the bra, looking at it and then perhaps buying it. But more often than not, she would replace the torn package in the rack, thus making a most unsightly display. Now, all bra packages, whether in vinyl, cardboard, or what have you, can be opened and closed at will and still look fresh and neat.

In addition, the retailers constantly strive to influence the manufacturers to standardize the outside dimensions of their packages so that they can display a number of different packages in the same rack, thus effecting multiple sales without having their stores cluttered with a variety of different-sized and different-colored racks. As for the finished package, its color and materials, these decisions are made by us.

A-C® Polyethylene

CARTON COATINGS OFFER 7-WAY PROTECTION

- No more fiber scratch
- Improved scuff resistance
- Higher chemical resistance
- High grease resistance
- Better gloss
- Moisture resistance
- Reduced rub-off

Allied Chemical

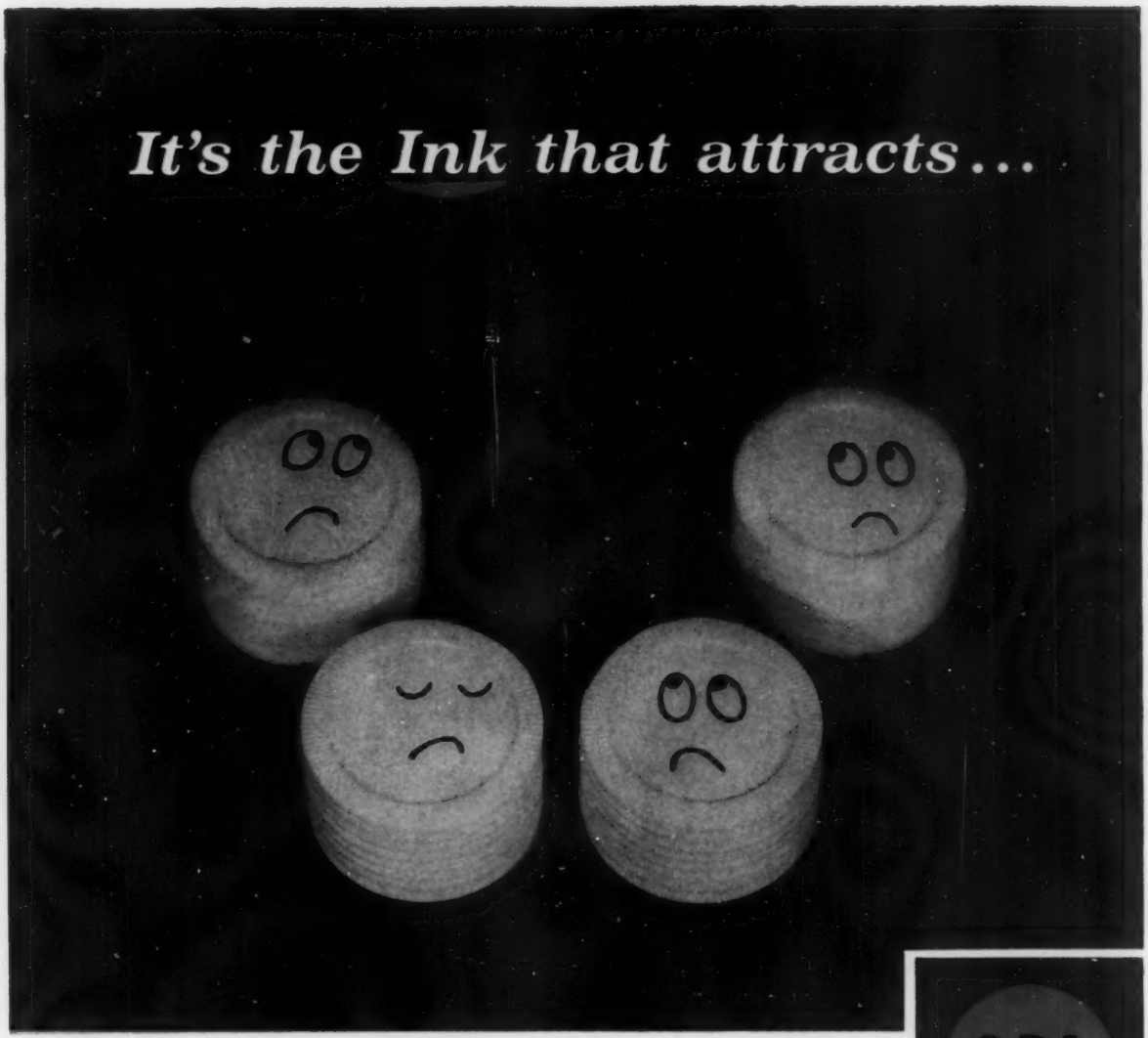
If grease, moisture or fine finishes present packaging problems for your product, here's how you can pack and ship them safely *without recourse to costly carton liners:*

Incorporate A-C Polyethylene into your present carton-coating operation! It will eliminate fiber scratch and scuffing, give your cartons adequate resistance to grease, water and chemicals.

A-C Polyethylene can save you money, too. When you add it to ordinary wax coatings, *penetration is drastically reduced,* resulting in less wax consumption. For example, with straight paraffin, the normal coating weight is 7-8 lbs./1000 sq. ft. With addition of A-C Polyethylene, *it is frequently reduced to 3-5 lbs./1000 sq. ft. with superior protection!*

Write for literature, free samples. Free samples and technical data are now ready for your evaluation. Just write us at the address below. Or ask your local Semet-Solvay representative for a demonstration in your own plant. He can show you, right on your own equipment, how A-C Polyethylene can improve your cartons, save you money at the same time! *Contact us for the names of processors in your area who make up blends of A-C Polyethylene and wax.*

SEMET-SOLVAY PETROCHEMICAL DIVISION
Dept. 555-L, 40 Rector Street, New York 6, N. Y.
National Distribution • Warehousing in Principal Cities



IDENTIFY and BEAUTIFY with...

GPI

PRINTING INKS can give your product, package or promotion that *blue chip* look. And it's a sure bet that you'll be the winner as a result.

That's why it's so important to use the *right* printing inks—right in color, right in quality, right in cost, and right in *performance*. Inks that will do a good job both on the press and on the end product.

Let GPI help you *attract* and *hold* more customers with a complete line of GPI letterpress, lithographic, gravure or BBD flexographic printing inks.

And if you're particularly interested in *blues*—from Alice to Yale—we have them. In fact, we'll be happy to work with you to make one all your own. Why not give us a try—call or write:

GPI Sun

Branches in all principal cities

GENERAL PRINTING INK

DIVISION

Sun Chemical Corporation

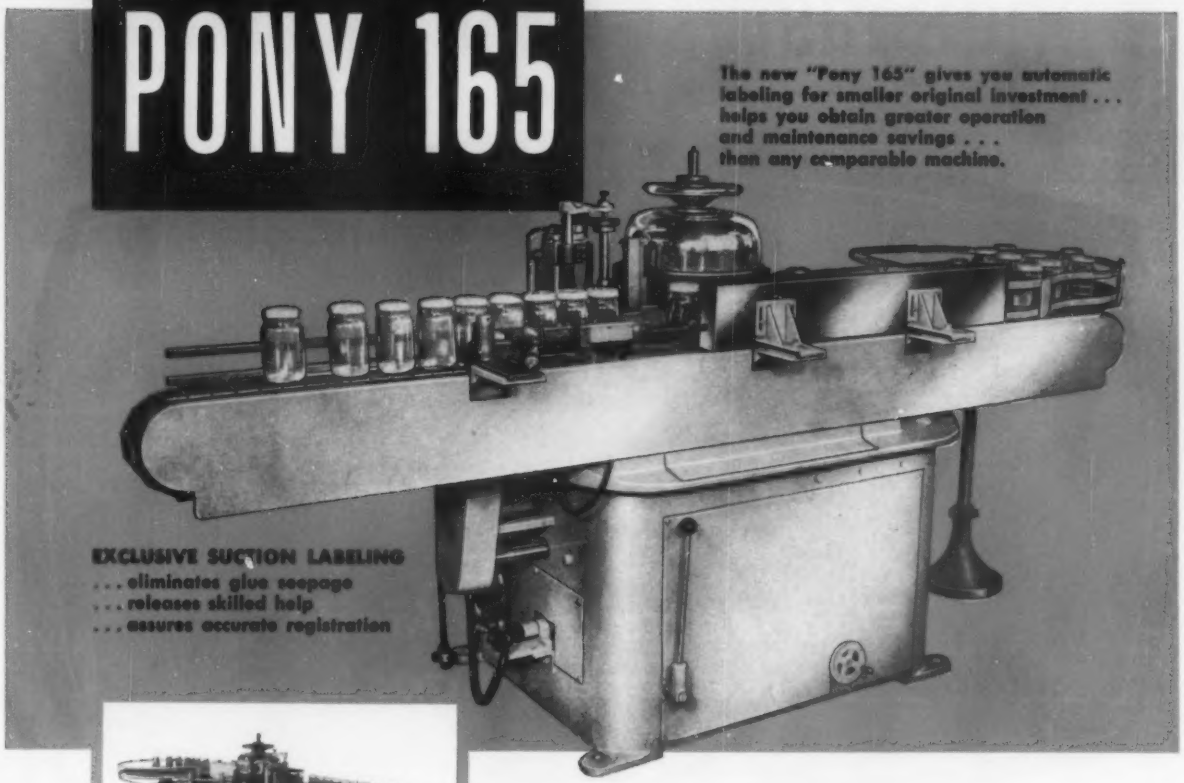
750 Third Avenue, New York 17.

New! Delivers up to 165 labeled bottles per minute

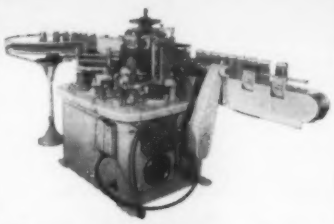
THE MOST PRACTICAL LABELER EVER DESIGNED ESPECIALLY FOR ROUND BOTTLES

PONY 165

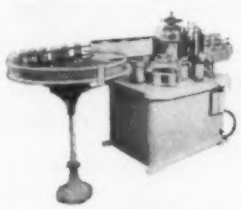
The new "Pony 165" gives you automatic labeling for smaller original investment . . . helps you obtain greater operation and maintenance savings . . . than any comparable machine.



EXCLUSIVE SUCTION LABELING
. . . eliminates glue seepage
. . . releases skilled help
. . . assures accurate registration



Conveyor and feed screw set up positive "locked in" spacing for accurate label registration.



Rotating accumulating table may be placed to left or right, can be used as terminal point for case packing.

The "Pony 165" gives you speed, precision labeling, lower operating and labor costs... all for less than $9,000, the lowest price at which a labeler of this calibre has ever been offered.* Suction labeling assures you of top package appearance. No label slippage, no glue seepage, no loss of adhesion, no registration problems.

This money-saving new labeler takes any stable bottle ½" to 3½" in diameter. Maximum label size is 5½" wide by 5½" high; minimum, 1⅛" wide by ½" high. Built-in variable speed control. Only twenty minutes for a label change, five minutes for a bottle change.

Write for complete descriptive literature.

*Price subject to change without notice.

NEW JERSEY MACHINE CORPORATION

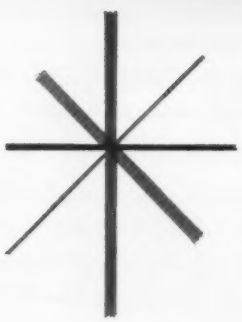
GENERAL OFFICES AND PLANT: 1500 WILLOW AVENUE, HOBOKEN, N. J.
FACTORY SALES AND SERVICE BRANCHES: CHICAGO, CINCINNATI, LOS ANGELES

Makers of the Pony Labelrite • A dependable labeling machine source for more than 38 years.

Find out about **SENSI-STICK**...
World's fastest hand labeling

Labels by Steigerwald

Fine labels of all kinds at reasonable cost



No glue, no water, no lost time with Sensi-Stick, our special pressure-sensitive labels. Permanent or removable, individual or in rolls.

Send us your labels for redesign, without charge or obligation; or ask for our estimate on printing your present labels. Telephone, wire or write to any representative below or to A. M. Steigerwald Co., 910 West Van Buren, Chicago 7. Tel. TAylor 9-5400.

CINCINNATI 27, O.
Stollmaier & Son, Inc.
Mariemont Center Bldg.
Bramble 1-0222

DETROIT 3, MICH.
Harry W. Hogg
20157 Greeley Ave.
Diamond 1-3848

LOUISVILLE, KY.
Practical Products Co.
319 Jefferson St.
Juniper 7-1257

CLEVELAND 21, O.
A. C. Foster
4040 Mayfield Rd.
Evergreen 2-7555

KANSAS CITY 5, MO.
A. B. Mason
905 Jefferson St.
Victor 2-6580

MILWAUKEE, WIS.
H. C. Lackowski
8849 So. 76th St.
Garden 5-5850

MINNEAPOLIS, MINN.
J. E. & J. L. Moor
3329 Dupont Ave., So.
Taylor 4-5309

ROCKFORD, ILL.
Blackhawk Paper & Cordage
630 Cedar St.
4-5261

NEW YORK 25, N. Y.
John H. McLaren
500 West 111th St.
Monument 2-0237

ST. LOUIS 5, MO.
Marvin Yates Co.
111 So. Bemiston Ave.
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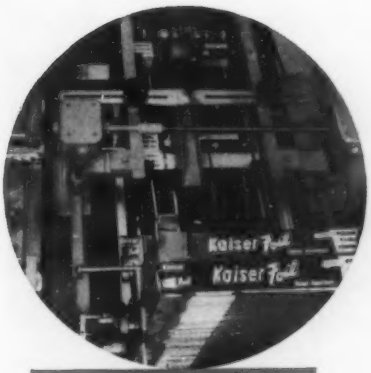
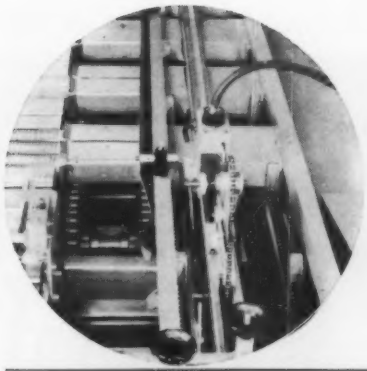
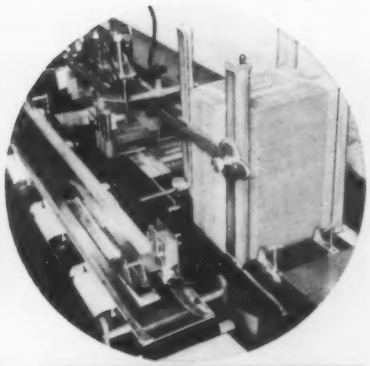
GOLD OR SILVER EMBOSSED • DIE-CUT OR SQUARE • FOIL SEALS AND TAGS • FLAT OR CONTINUOUS ROLLS • FOR HAND OR AUTOMATIC USE • HEAT SEAL • PRESSURE SENSITIVE • SPECIAL ADHESIVES



FOR ALUMINUM FOIL

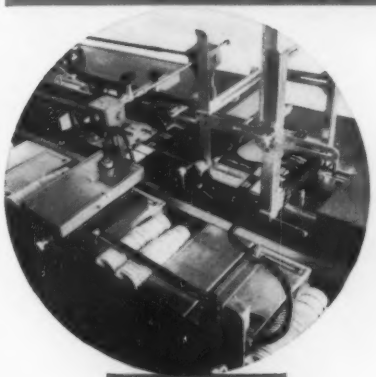


FOR COOKIES AND CRACKERS

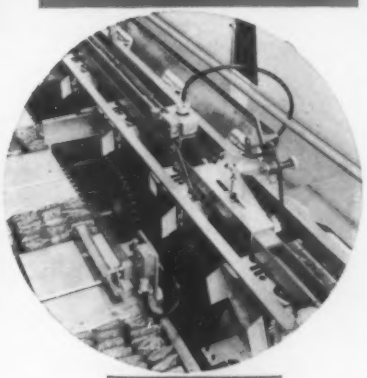


FOR SANITARY NAPKINS

PIES AND CAKES



PAPER CUPS



SOAP PADS

the perfect combination of speed and flexibility

CECO MODEL 50 AUTOMATIC

Here is the machine specifically designed for the problem package – rolls of aluminum foil, sanitary napkins, paper products, cookies – any product that can take advantage of CECO's bucket feed method. Automatic? Right, fully automatic. This is a constant motion cartoner in which the carton is opened, product inserted, and carton closed – automatically. The opportunities to save on labor costs are exceptional. Flexible? Right again! Changeover from a 7" roll of aluminum foil to an 18" roll takes less than 30 minutes. And, like all CECO cartoners, the Model 50 can be had to handle either glue or tuck style cartons and can be accessorized to meet individual requirements.

A MACHINE FOR EVERY REQUIREMENT

Other CECO machines include the Model 3901 glue sealing machine, the Model 40 semi-automatic cartoning machine, and the Model 45 fully automatic.

See Us At The PMMI Show
Booth 1205

CECO

CONTAINER EQUIPMENT CORPORATION
BLOOMFIELD, NEW JERSEY

CONTAINER EQUIPMENT CORPORATION
78 LOCUST AVENUE, BLOOMFIELD, NEW JERSEY

Please send literature checked off:

☐ Model 3901 ☐ Model 45 ☐ Model 40 ☐ Model 50

NAME_____

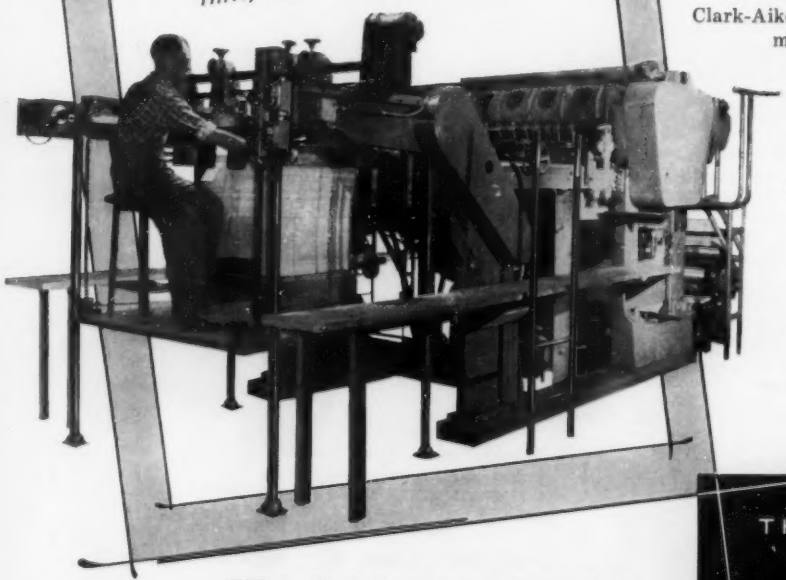
COMPANY_____

ADDRESS_____

CITY_____ ZONE____ STATE_____

THE perfect package REQUIRES precision equipment

. . . . and there's a Clark-Aiken cutter-piler engineered to meet your specific packaging requirements for fast, accurate sheeting of paper, film, foil, board and fabric.



KVP uses this Clark-Aiken Type DS Register Sheeter to precision cut light bond, gift wrapping, waxed paper, laminated foil, parchment, and for multiple sheeting ham wrappers.

Creative packaging may start as a piece of blue sky but Clark-Aiken precision sheeting equipment can help make the dream a reality—and with increased production at lower operating cost.

Clark-Aiken designed equipment produces 'round-the-clock finishing room service with minimum maintenance and complete cutting accuracy. And when you consult Clark-Aiken engineers on your particular sheeting problems you get qualified recommendations that are based on an extensive study of **your** needs and shop conditions. Each piece of Clark-Aiken equipment is engineered from the ground up to meet those needs, whether it is for a fully equipped finishing room or one machine to meet a specific sheeting requirement.

Clark-Aiken's practical approach to finishing room automation will help your packaging meet the test of the market place. The result is low maintenance, high speed production machinery that cuts and controls costs.

Why not learn how Clark-Aiken experience and equipment can help improve your packaging profit picture by consulting Clark-Aiken today.

You are cordially invited to visit us in Booth 1210 at the PMMI Exposition in New York's Coliseum, November 17th to 20th.

Canadian Representative: Gordon W. Keates
133 Flora Drive, Scarborough, Ontario

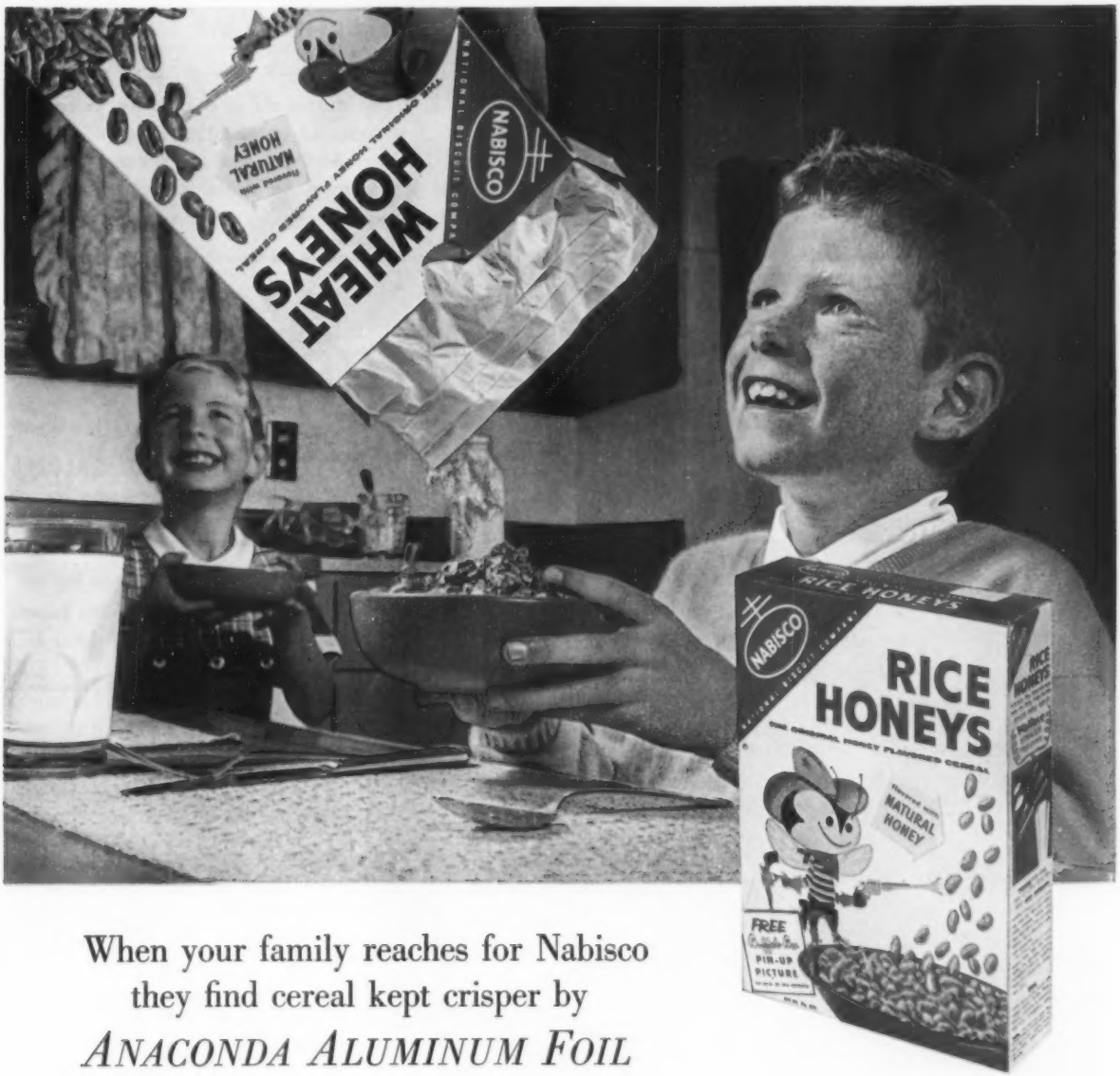
THE *Clark-Aiken* COMPANY

795 HART AVENUE

LEE, MASSACHUSETTS

In Canada: Gordon W. Keates, 133 Flora Dr., Scarborough, Ont.

Another FOIL packaging success with ANACONDA ALUMINUM...



When your family reaches for Nabisco they find cereal kept crisper by *ANACONDA ALUMINUM FOIL*

Getting your family's day off to a crisp start is **Nabisco's** business. Their honey-coated cereals are something special at breakfast; but honey's habit of attracting moisture made guarding crispness a problem in protective packaging.

The problem was solved with an inner-pouch consisting of a triplex lamination made by **Riegel Paper Corporation,** New York City, using **Anaconda Aluminum** foil between outer layers of Riegel glassine, to assure product protection.

Nabisco cereals get *continued* protection, too, because the inner-pouch refolds to seal in crispness, right down to the last crunchy bowlful.

To give your product that something "extra" for added sales, give it special packaging in aluminum foil. Contact your nearby Anaconda Aluminum representative, or write our General Offices. Also, for more information about us, write for our new booklet, "*This is Anaconda Aluminum*", Dept. MF-11, Louisville 1, Kentucky.

When you buy foil for packaging or printing, remember... every industry has one member who specializes in customer satisfaction.

ANACONDA ALUMINUM®

ANACONDA ALUMINUM COMPANY • GENERAL OFFICES, LOUISVILLE, KENTUCKY

DOW | **FROM PACKAGING CHEMISTRY, A BETTER WAY**

A package today has to do more than protect what's inside it. To survive in the fierce competitive battle for shelf space, a package has to be its product's eye-catcher, merchandiser and salesman. Through packaging chemistry, Dow materials are helping pace the development of packages that meet modern sales needs. Several of these new packages are shown on these pages. There are many more where they came from.

New Twists With Styron Give Old Products New Impact

Every package in this picture has one thing in common—Styron® has helped make the product inside it sell faster.

Dairymen have learned that cottage cheese sales curves can go from dull to sensational with the added impact of plastic packaging. Plastic containers made of Styron—with attractive color and design built in—make table-ready packages shoppers can't resist. And they do their jobs efficiently and economically.

Injection molded closures made of Styron have captured the fancy of bottlers because they can be made at high speeds, resulting in economies on large production runs. They lend themselves nicely to intricate decorative effects. Outstanding premium package potential here.

Dow research, teamed with industry, assisted in the development of the end caps made of Styron. A brand-new, low-cost package that effectively weds plastic and other materials to do a better job. Tops and bottoms of Styron come in decorator colors, won't scratch, won't leave unsightly rust rings.

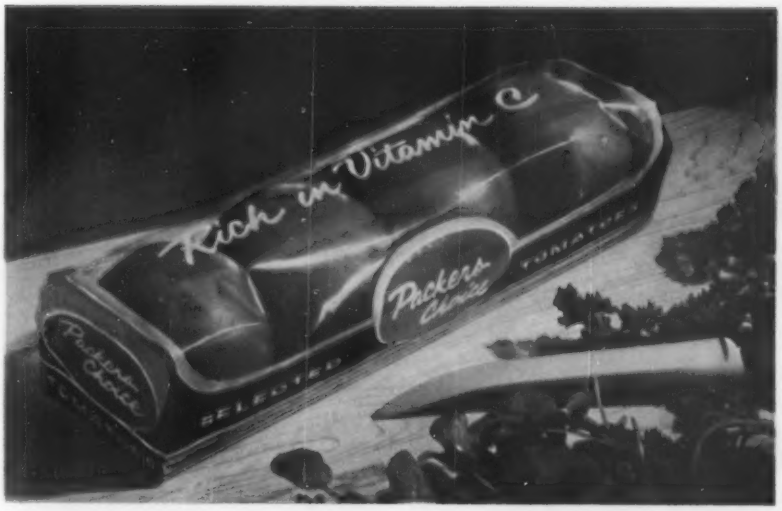
When a product has to be showcased as well as protected—like the sensitive timer device in the picture—nothing does it like Styron. Tough, clear Styron gets it there safely, helps *sell* it through low-cost visual salesmanship.

Packaging with Styron is functional, economical, and highly merchandisable. Don't these packages suggest ways Styron could help *your* product sell faster?

LOW-COST, PICTURE WINDOW

protection for produce

Better packaging at the produce counter is moving more volume with *less* employee attention. And of all the new produce packaging ideas, one of the best is this tomato pack, combining paper and Trycite*. This economical new polystyrene film went to work when packers asked for a more functional, more economical film for produce. It breathes, allowing just the right amount of fresh air produce needs, yet has outstanding aging characteristics for better protection. It's sparkling clear, prints admirably, and won't wrinkle. If you're in produce, meat, baked goods, or window envelopes, you need Trycite. Maybe you need its low-cost sales power whatever you're in. *TRADEMARK



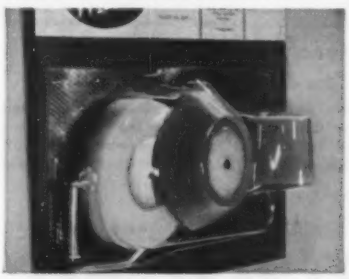
BOXBOARD CONTAINERS

and a coating idea

Dow doesn't make boxboard, doesn't even pretend to be an expert on boxboard containers. But through packaging chemistry, Dow has become a major factor in helping boxboard people and their customers boost sales. How? Through latex coating. Dow Latex in the clay coating adds a new dimension of printability to boxboard that makes color reproduction just about as good as you can get it. Latex benefits don't stop there, either. The latex makes the coating more elastic—provides better freedom from cracking at the folds. Paperboard suppliers have latex coated grades—ask for them—you'll have a better looking package.

OTHER CHEMICALLY ENGINEERED PACKAGES WELL WORTH NOTING

Specialty packaging. Ideal for vacuum or drawn blisters, Ethocel® offers excellent physical properties for eye-catching, uniform packages, fewer rejects, faster cycles because it is easily formed.



Upgraded packaging films. A coating of Saran Resin on packaging films reduces moisture-vapor transmission, increases clarity, improves resistance to grease, oils, water, organic liquids and vapors.

Kitchen-fresh appeal. Crystal clear Styron plastic containers put delicatessen foods on display . . . reduce breakage . . . simplify handling . . . multiply sales of "fresh daily" foods.

You're Missing Something if you're not keeping abreast of the dynamic things happening in packaging chemistry. Dow serves this industry with better materials and know-how, and provides prompt attention to any problem we can help solve. We may have an idea or two that could help you.

DOW PLASTICS BASIC TO PACKAGING

Molding Materials • Films • Film Resins
Sheeting • Coatings • Expandable Beads

THE DOW CHEMICAL COMPANY

Midland, Michigan

DOW

International AIR BOXER *Provides "PORTABLE CARTON-CLOSING DEPT."*

This lightweight, air-operated unit has become a versatile "standby" stapler for peak load periods . . . is instantly adaptable to any size or shape carton. Non-fatiguing trigger action is appreciated by operator. It makes the same neat, strong closure characteristic of the other International Staplers. This Air Boxer's investment was recovered in about 6 months.

International END STAPLER
Replaces Two Slower Operations

Previous to the END STAPLER installation, carton bottom flaps were closed by one closure method and top flaps by another. Steel staples now close both tops and bottoms. The result is a strong, neat package that stores well, ships safely and is unaffected by humidity. The unit has paid for itself in just 2 months!

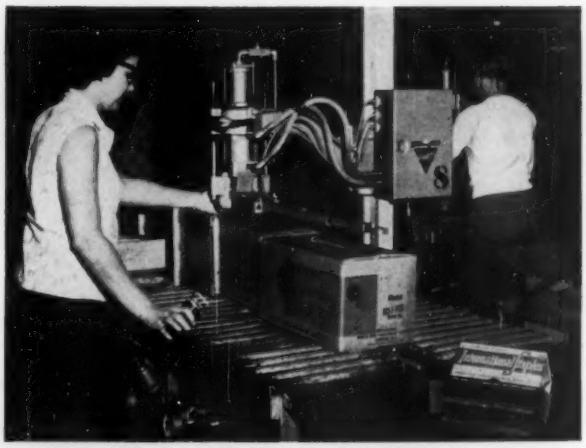
RCA REPLACES OTHER CARTON CLOSURE METHODS

with International Stapling Machine Program

Labor and Material Savings Pay for Equipment in Less than 6 Months' Average

International Staplers are now an important part of the newly streamlined packaging operation of the Radio Corporation of America. Operations in each area of Installation have resulted in significant increases in labor efficiency and decreases in material costs.

For additional information on these Staplers, or others in the complete International line, write us or contact your International Representative.



International DUAL STAPLER
Closes Carton Tops & Bottoms In One Operation

In just one simple, accurate 3-second cycle, the DUAL STAPLER securely staples *both* top and bottom flaps of the RCA cartons from the outside—after the cartons have been filled. This has eliminated pre-assembled set-up boxes as required by previous methods. The unit has paid for itself in little over half a year.

INTERNATIONAL Gold Crown

ISM

STEEL STAPLES SEAL SECURELY

International Staplers

INTERNATIONAL STAPLE & MACHINE COMPANY
P. O. BOX 270 • HERRIN, ILLINOIS

Originators of Carton Closing Staplers

People Reach for the Packages that Promise Most

The sales success of these packages proves their ability to promise satisfaction (and keep that promise) time after time.

Pictured are only a few of the hundreds of sales-winning packages we produce for America's leading brands. We'd like to send you our booklet showing how we can put *promise* into *your* packaging. Ask, too, for product information on any of these packages in which you are particularly interested. Drop a note to Warren Townsend, 2101 Williams Street, San Leandro, California.

Packaging for all America

CROWN ZELLERBACH WESTERN-WAXIDE DIVISION

In Canada address product inquiries to Crown Zellerbach Canada Limited, Vancouver, B. C.

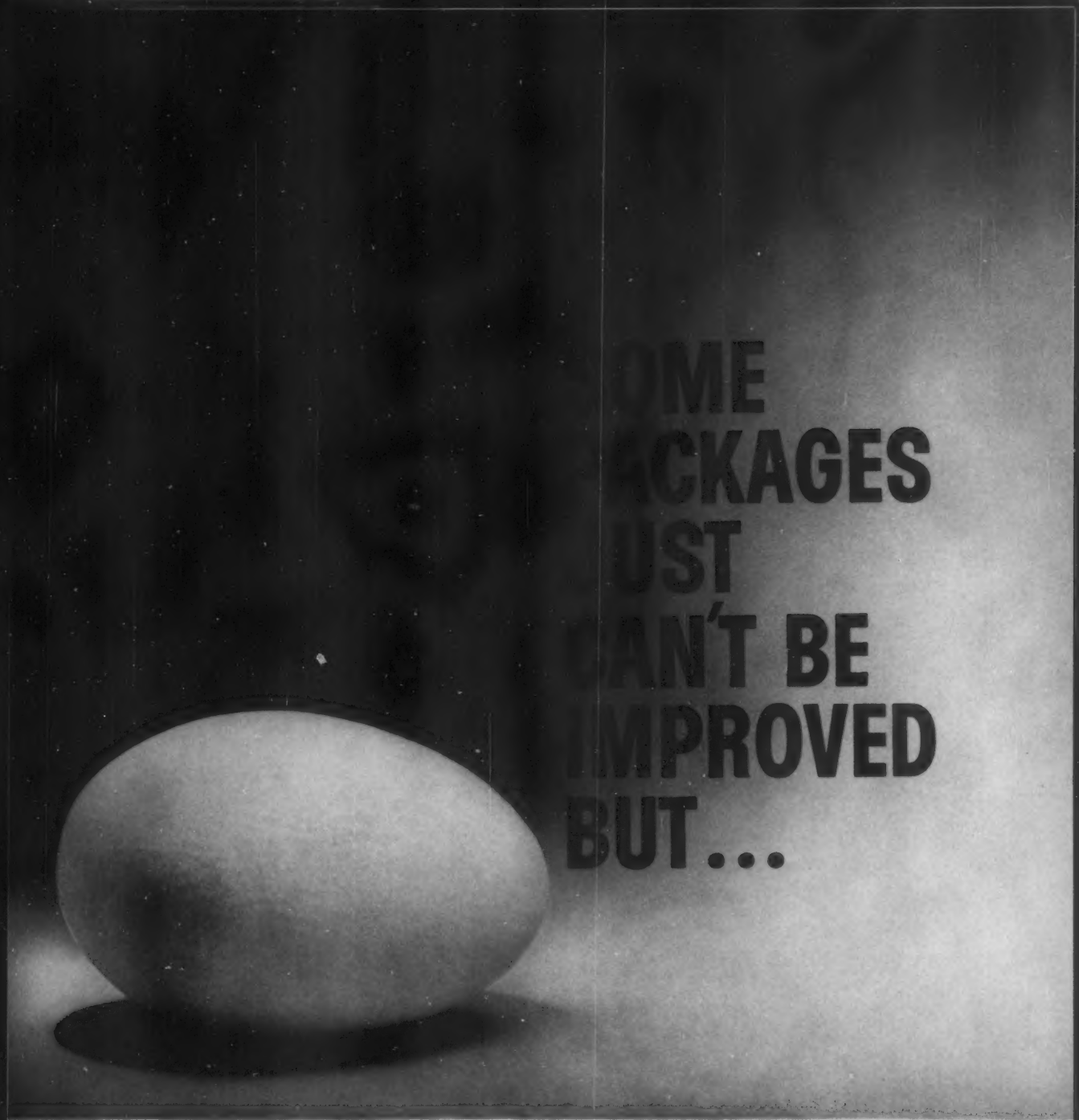
ROWELL
DRUG and COSMETIC
BOXES

Many of America's leading toiletries and cosmetics, and finest pharmaceuticals and precision products, are entrusted to fine set-up boxes by Rowell.

Rowell boxes, with the look and the feel of quality, assure maximum shelf-appeal. They protect delicate and precisely fashioned articles as no lesser box can.

Shouldn't your product be in a Rowell set-up box when it faces comparison, or when it undergoes handling? Call or write for a prompt analysis of your requirements.

E. N. Rowell Co. INC.
BATAVIA, N. Y.



...others can, and improving them is our specialty. Plax concentrates on packaging in plastics. We make containers and wraps for scores of products—including food of all kinds. Clear, flexible Plax film and sheet of many thicknesses can offer your product startling advantages in appearance and utility. Some examples of dramatic packaging at remarkably low cost are shown on the pages following.

PLAX®

PLAX
GIVES A PACKAGE
A PLUS

INCREASE SHELF LIFE AND PROFITS

Now, increasing numbers of food packagers are displaying their wares in sparkling, transparent containers formed from Polyflex—the FDA approved* polystyrene extruded by Plax. Formed into low-cost disposable lids, domes, trays and containers, Polyflex increases impulse buying of a variety of fresh and frozen foods . . . including baked goods, meats, poultry, dairy products and many others. Polyflex is non-toxic, odorless, tasteless. It is waterproof, greaseproof and resistant to high and low temperatures. It will increase shelf life for many food products. Polyflex gives you more packages per pound.

*Unpigmented polystyrene—FDA approved 11-15-56. Quarterly Bulletin of Assoc. of Food and Drug Officials, Dr. A. J. Lehman

WITH NEW CRYSTAL CLEAR POLYFLEX.

The large staff of Plax designers and engineers, working with your specialists and fabricators, can help you develop unique package styling that will move your product faster. The foremost maker of plastic bottles, Plax now brings you Polyflex . . . a clear invitation to buy.

PLAX

PLAX GIVES A PACKAGE A PLUS

Crisp, high-clarity Polyflex film is one of the most attractive and economical overwrap materials for fresh foods in use today. FDA approved for direct contact with food. You can save up to 40% on your overwrap or carton window costs by switching to Polyflex. This superior film is machinable on conventional, high-speed packaging equipment, and heat-sealable for in-store or automatic packaging.

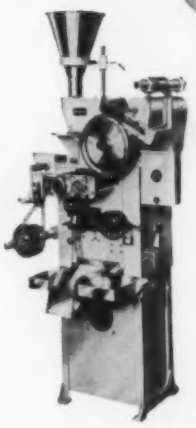
Plax Corporation, Hartford 1, Conn.

In Canada, Plax Canada Ltd., Toronto

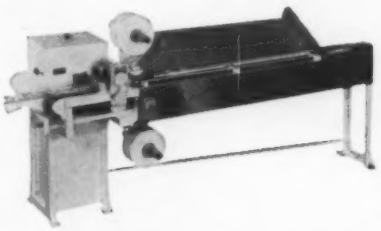
PLAX

PLAX GIVES A PACKAGE A PLUS

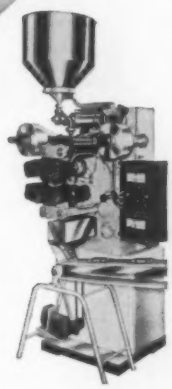
PKK . . . for powders, grainy products like tea and spices in portion packages; 5000-14,000 packages per hour; heatsealing cellophane, aluminum foil, cotton paper, etc. Sizes to 2 1⁵⁄₁₆" x 6⁵⁄₁₆".



TMK . . . for tablets and similar objects in strip at speeds up to 18,000 an hour. Works with heat-sealing cellophane, aluminum foil, other materials, handles tablets up to 1½" diameter.



IMK . . . for toothbrushes, sawblades, lollipops, ice cream sticks and other similar products at up to 65 per minute in paper or foil. Saves paper, makes attractive package.



KIPAK . . . for liquids, powders, granular substances; 2500-5000 packages per hour; cellulose film, aluminum foil, cellophane, acetate, Saran, Pliofilm, etc. Sizes from 1³⁄₁₆" x 1⁵⁄₁₆" to 5⁵⁄₁₆" x 17⁵⁄₁₆".

Other ***Kisab*** machines include . . .

VFK-VFK/b . . . for heatsealing cellophane, polyethylene, pliofilm and other foils or papers treated for heatsealing. VFK is delivered complete with motor, gearbox and controls; VFK/b comes without electricals.

HFK . . . for hand filling into tubes, tins and similar containers of mustard, pastes, creams and products of similar viscosity.

PFK . . . for automatic filling of dry products such as powder, crystals, pastilles.

Arenco introduces the new KISAB line of high speed packaging machinery

Designed and built to the highest standards of Swedish craftsmanship, these new ***Kisab*** machines package everything from liquid to lollipops in a wide variety of wrapping materials. After you have checked the speeds and other specifications listed above, you'll understand why alert American packagers are installing these new machines as fast as Arenco can deliver them! Parts and service are never any problem —Arenco maintains an expertly staffed fully equipped service plant right here in the U.S. Write today for information.

MANUFACTURERS OF FILLING, CAPPING, SEALING AND PACKING MACHINES

ARENCO

ARENCO MACHINE COMPANY, INC.

25 West 43rd Street
New York 36, N.Y.

Ucon brand propellants put action in products

Why don't you discover UCON Propellant service, too?

UNION CARBIDE CHEMICALS COMPANY
Division of Union Carbide Corporation
30 East 42nd Street, New York 17, N. Y.

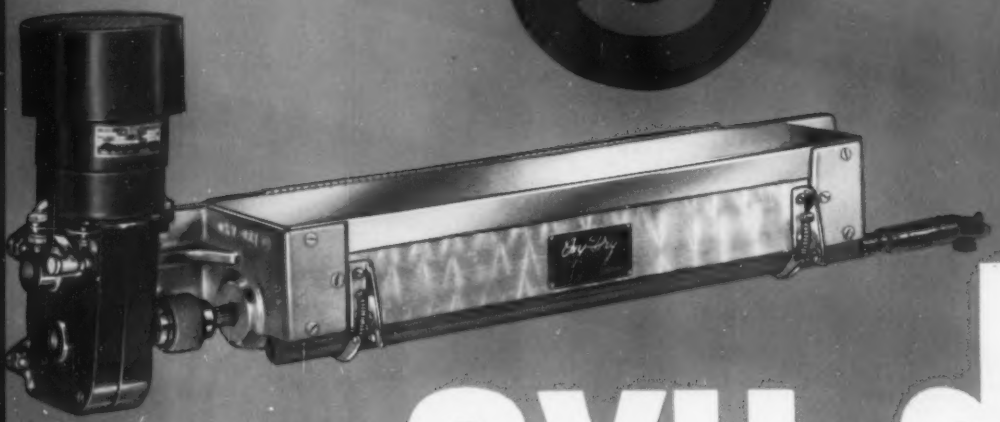
UCON and UNION CARBIDE are registered trade marks of Union Carbide Corporation

INK OFFSET PREVENTION

STATIC ELECTRICITY ELIMINATION

FASTER & BETTER PRODUCTION

YOU GET ALL 3 ONLY WITH...

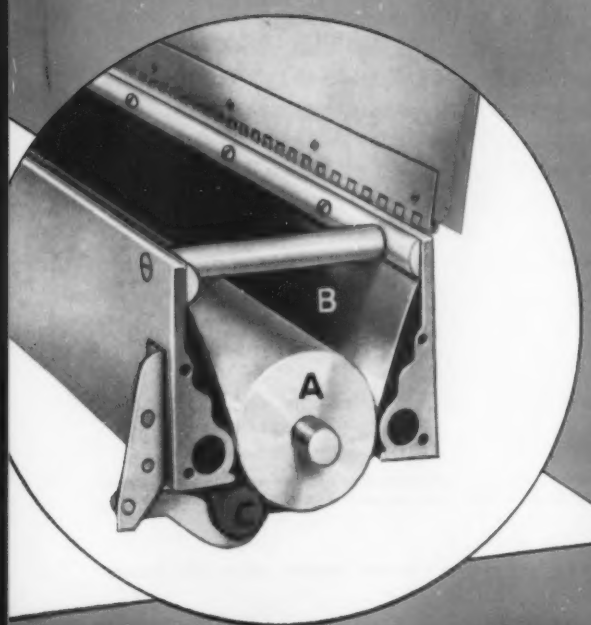


oxy-dry

INK OFFSET PREVENTION SPRAYERS

*Fully protected by U.S. Patents

OXY-DRY *sells profits to printers*



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Chicago 13, Illinois

FREE: ☐ 12 page booklet on Ink offset prevention

☐ Send Representative ☐ Do *not* send Representative

☐ Give us quotation on following installation(s):

Number of Presses	Press Name	Model Number	Maximum Sheet Size

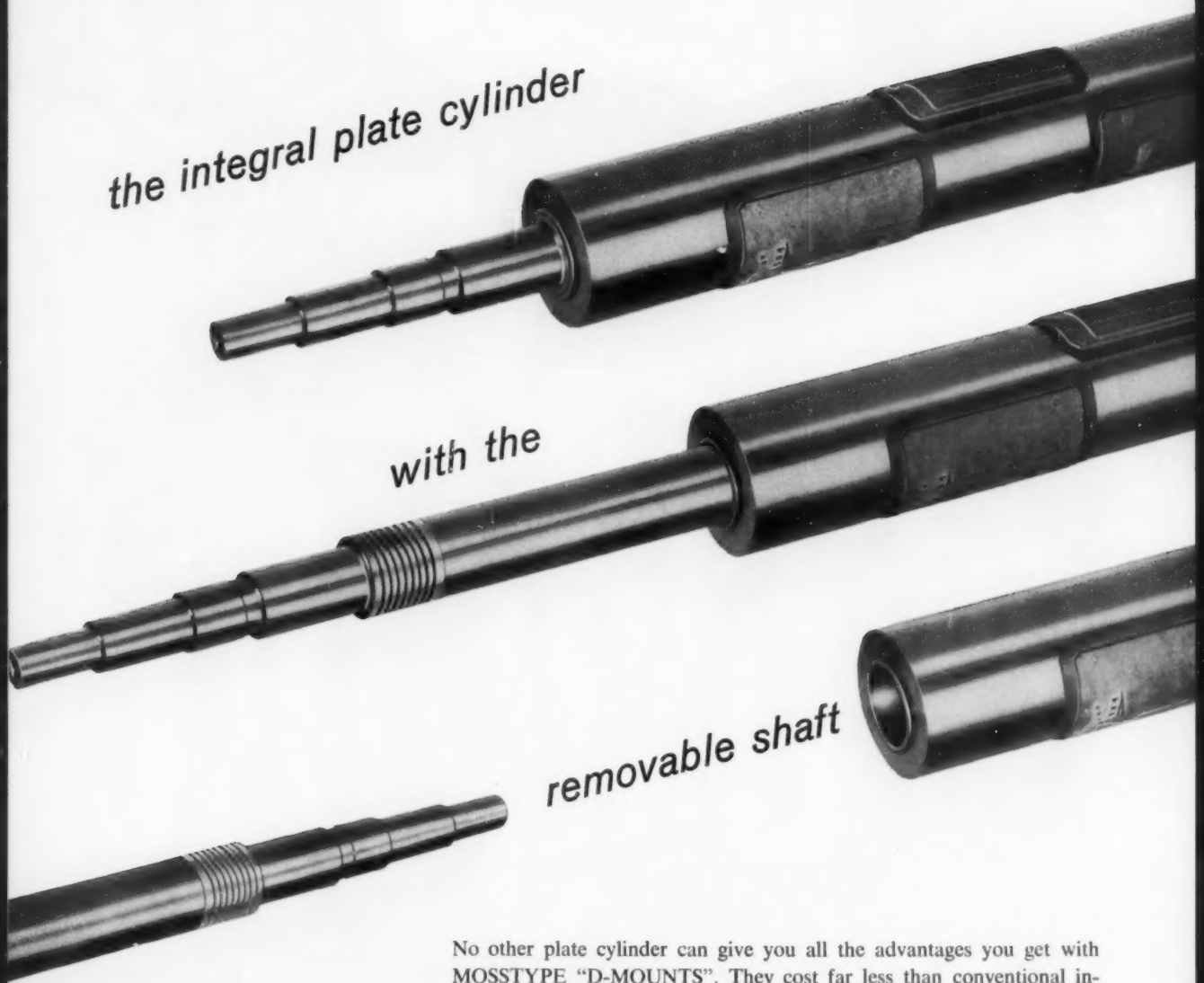
Your Name _____

Company _____

Address _____

City _____ Zone ____ State _____

MOSSTYPE "D-MOUNT"®



No other plate cylinder can give you all the advantages you get with MOSSTYPE "D-MOUNTS". They cost far less than conventional integral cylinders of comparable accuracy . . . made of lightweight alloy, they are easier to handle, permit faster press speeds, take up ⅔ less storage space. And they are far more dependable than ordinary demountables—simple, foolproof shrink-fit assembly of "D-MOUNT" sleeve and interchangeable shaft assures the concentricity and rigidity you need for precision printing. Hundreds of plants throughout the world are now using MOSSTYPE "D-MOUNTS". How about you?

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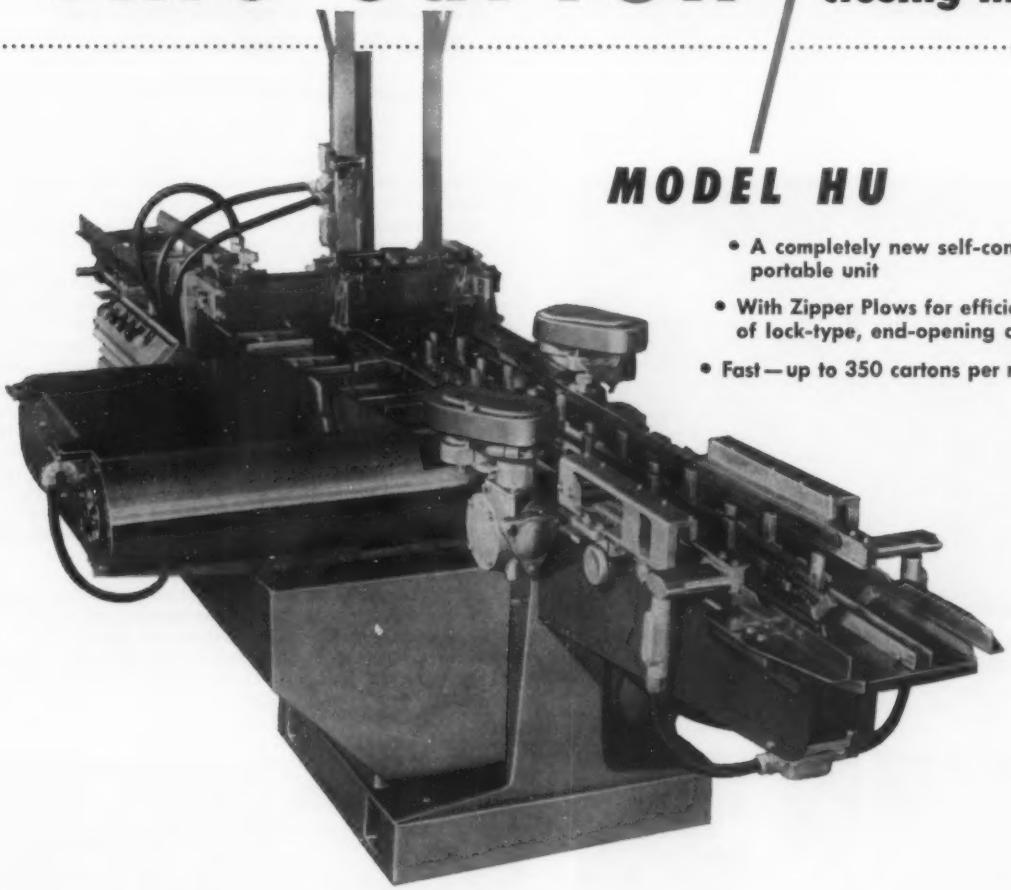
NEW fmc carton set up filling & closing machine

MODEL HU



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- Fast—up to 350 cartons per minute

Simply plug it in, fill the carton feed magazine with flat cartons, flip the "start" switches, and your FMC Model HU Carton Handling Machine takes over—giving you one of the smoothest high speed automatic machine operations in your entire plant.

No other carton handler – packaging such products as pies, TV dinners, ice cream cakes and pizza pies – gives you all these advantages:

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3. **Trouble-free operation** and long machine life – this is ruggedly designed and precision constructed equipment.
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FOOD MACHINERY AND CHEMICAL CORPORATION

Canning Machinery Division

General Sales Offices:

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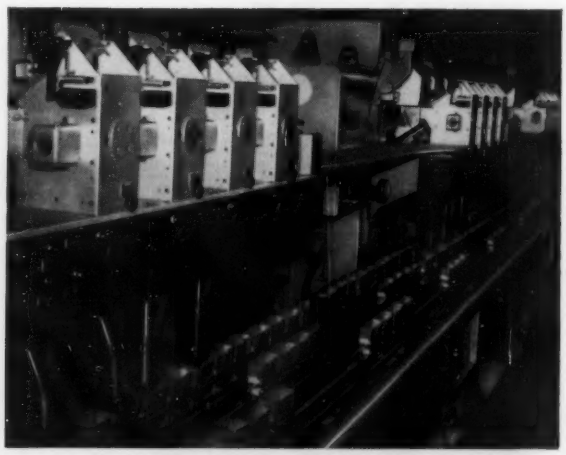
175 MILLION POUNDS OF CRACKERS AND COOKIES PER YEAR!

- Massive volume makes extraordinary demands on packaging equipment
- Pneumatic handles it in stride

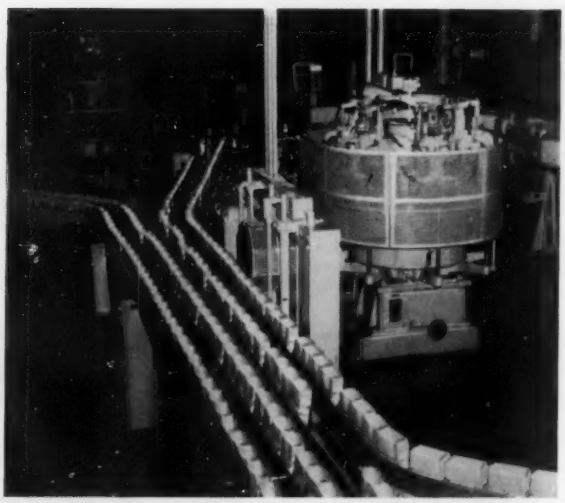


Series of three Pneumatron weighers in operation at Nabisco's ultra modern plant at Fair Lawn, N. J.

You would find it rather difficult to locate a pantry in any American home that does not have at least one variety of NABISCO crackers or cookies "in stock" for demand orders by hungry children and adults alike.

These mouth-watering goodies are of many types and shapes – from animal crackers to pretzels, to delicate and tasty cocktail tidbits. Significant is the fact that NABISCO places heavy dependence on Pneumatic machines of various types to help take care of the enormous output of its battery of modern band ovens – each with a capacity of 700,000 crackers per hour. Core of the Pneumatic "line" is the Pneumatron units which see to it that every package gets its full measure – no more, no less. The remarkable accuracy of these weighing marvels is NABISCO's assurance of exact weight per package, in every package. Product freshness from oven to home is assured by the "double package" also produced by Pneumatic equipment. Top closing and sealing by Pneumatic finally make the package ready for the road.

To any producer of packaged or bottled products, Pneumatic's "lower cost per container" performance is more important today than ever before. Rising costs call for top efficiency. Better investigate what this type of protection can mean in your plant. We'll be happy to show you, any time you say the word.



Section of Nabisco animal cracker packaging line. Machines are Pneumatic Cyclo-Seal top closure units.

PNEUMATIC SCALE CORPORATION, LTD., 82 Newport Avenue, Quincy 71, Mass. Sales Offices: *New York; Chicago; Dallas; Rochester.* Agents: *Fred Todt Company at Los Angeles, San Francisco and Seattle. Rockwell Pneumatic Scale Ltd., Edgware Road, London, N. W. 2, England, O. R. M. A., Paris 8, France.* Subsidiaries: *Delamere & Williams Co., Ltd., Toronto; Carbert Manufacturing Co., Inc., Cambridge, Mass.*

PNEUMATIC

World Report

Abstracts from foreign packaging magazines

SWITZERLAND

Plastic bottles from sheet material

A new machine that produces plastic bottles from thin thermoplastic sheet in an unlimited number of shapes, developed by a Zurich firm, is described in detail in *Packaging* (England). The containers, it is claimed, are to be competitive with metal and glass. The simplicity of the process and high production rate of some 3,000 bottles of 1-litre capacity per hour reportedly enables the system to be applied for the forming of containers of distinctive design and shape at low cost. In many instances, the machine is suggested for economical in-plant product-manufacturer installations. Designed for operation using unplasticized polyvinyl chloride sheet (acceptable for food packaging), the machine uses high-frequency welding as a means of achieving an extremely strong fin seal. The thermoplastic sheet material is fed from a reel. After initial folding into a V-shaped channel, it is pre-heated to allow for blow forming. The containers are produced in pairs, the tooling comprising paired molds within which the V-folded sheet is clamped, while air under pressure is injected from below to distend the material to the exact shape of the molds. The formation of the container is completed by the action of the high-frequency electrodes shaped to the profile of the containers which weld the periphery to form the secure fin seal. Dies cut through the fin seal to trim the edges.

The fact that the containers are made from a single sheet assures a sturdy base without seam. Only the sides have seals. Wall thicknesses are substantially uniform because of forming from a single sheet.

Experimental work is continuing with thermoplastic materials other than unplasticised polyvinyl chloride and promising results, it is stated, have been obtained by the use of low-density polyethylenes.

Suggested uses of the containers are for household cleansers, detergents, liquid soaps, household bleaches, starches and synthetic starches, liquid shoe polishes, semi-liquid wax polishes, textile dyes, carpet shampoos, insecticides and others. It is also stated that the bottles could hold salad dressings and sauces. The thinner-gauge bottles supposedly can make use of the squeeze function, thus would be suitable for dispensing semi-liquids and puffing powders.

ENGLAND

Magnetic handling to clean metal cans

While they are being rinsed with jets of cold water, new open-top cans are held upside down by magnets in a new washing or dry-cleaning machine described in *Packaging News* (England). The magnets are used, it is stated, so that no pressure is put on the cans which might distort them and cause difficulties during subsequent filling and closing operations. Each can is automatically positioned on a machined seat incorporating a permanent magnet. When the seat is inverted to travel through the rinsing station, the can remains in place on it. The hold of the magnet is broken when a discharge star wheel transfers the can to a slat conveyor or feed table. Four models giving maximum outputs from 400 to 1,600 dozen per hour are available.

THE NETHERLANDS

New tear strip on one-piece aluminum can

A novel one-piece aluminum-can construction incorporating an all-plastic sealing band with easy-opening tear strip has been noted in Holland by *Packaging* (England). "The closure undoubtedly tends to popularize the application of aluminum containers in the food trade and in the pharmaceutical industry," the article states. "This new design has been developed by a firm specializing in impact extrusion and the deep drawing of aluminum containers. It comprises a system of lidding by attaching the lid to the can by means of a plastics band having an integral tearing strip. This band virtually forms part of the body of the can. For closing it, the lid is positioned in the conventional way, then seamed on in the same manner as when attaching the lid of metal-ended composite cans and using the same kind of equipment." Advantages pointed out are considerable. The can is completely and hermetically sealed; consequently, the system can serve for vacuum packaging, even sterilization if a plastic material with a melting point above sterilization temperature is used. The package is easy for the consumer to open and convenient to reclose. The cans can be handled on any conventional seaming machine suitable for composites. Plastic bands may be any color to distinguish various products or to add a decorative effect.

CANADA

Cost index from across the border

Some significant packaging cost figures were revealed by the editors of *Packaging Progress* (Canada) while browsing among the transcripts of a Report of the Royal Commission on Price Spreads that was prepared to be submitted to the Governor-in-Council during September. According to the Canadian publication, a spokesman for the Kellogg Co. of Canada, using 1949 as index year at 100, pointed out at a hearing that Kellogg's packaging costs in 1957 were 53% above what they were in 1949. But during the same time wages went up 95% and transportation costs increased 81.8%. Grain on the other hand—the basic ingredient of Kellogg products—was reported as up only 6% from 1949 and had fluctuated in price during the same period from a high of 19% more to a low of 10% less than the 1949 cost established as the index figure.

ENGLAND

Overweight calculator to promote reducing drug

By using telescoping fibre tubes in a "slide-rule" arrangement, Pfizer, Ltd., in Britain has devised an unusual promotion package for Preludin, an appetite-controlling drug. So arranged, the tubes become a calculator mailed to doctors for quickly comparing a patient's weight with the norm for age, sex and height. Wrap-around paper labels carry charts which match up with holes in the outer tube to reveal required data when the tubes are slid up and down and revolved. Pierced metal ends prevent air-pressure build-up when the tubes are telescoped.

SWITZERLAND

Tea packer forms double-bag packet or lined carton

Several styles of package can be produced on a new Swiss-made machine described in *Packaging News* (England). The machine has been designed for forming, filling and closing tea packets at speeds rated up to 90 a minute. It can be supplied to set up a carton around a lining bag made of paper or paper-backed foil. Alternately, a double bag may be produced from two reel-fed materials such as paper-backed foil for the inner bag and glassine for the outer one. If unprinted paper is to be used for the outer bag, the machine may be equipped to apply a printed label,

fed from a stack, on to one face of the package. Each model is built to handle one size of package only, although it can be adjusted slightly to allow for differences in volume of various blends. Size of the packet-forming mandrels may be altered by a limited amount so that a packet with a smaller or greater depth is made.

Forming and gluing of the two bags can be carried out either simultaneously or in separate operations, depending on whether longitudinal seams of one or both bags are to be glued. If required, the machine can be equipped to fold and close the packet in a style, developed by the machinery manufacturer, said to reduce the amount of bag material used.

GERMANY

Progress in pre-packaging meats and produce

Growth of self-service marketing in Germany is pointed out significantly in two articles in *Die Neue Verpackung* (Germany) discussing economics and principles of pre-packaging. One deals with the pros of central packaging as a means of overcoming rising costs of in-store pre-packaging. The other outlines the high level of packaging requirements to assure quality of fresh fruits and vegetables and suggests how such requirements could be met, without undue costs, by the selection of efficient packaging materials, by reducing the types of packages to a minimum and by adoption of more efficient operating methods.

ENGLAND

Egg group wants new packaging ideas

Carton makers and designers in the UK are being invited to develop new retail packages for eggs. Says *Packaging News* (England), the Egg Marketing Board is looking for a pack which would help both to increase impulse sales and to reduce breakages of the 600-million dozen home-produced eggs now marketed annually under the British Lion brand. It has engaged the Produce Prepackaging Development Assn. to cooperate on the project. Mechanical strength and an attractive appearance with scope for good surface design are two of the requirements. Others: divisibility into half-dozen units; constructions to hold more than one grade, large or standard; rapid erection by hand or machine; dimensions to suit existing equipment; structural design that will permit eggs to be dropped into it from a height of about 4 in.; an easy but effective means of closure, and economical in cost. Also, a requirement is that at least part of each egg should be visible.

SCOTLAND

Proposal to produce home-grown pulp

Four major paper companies are jointly investigating the possibility of building a pulp mill in the Scottish Highlands to produce bleached pulp from home-grown softwood, according to *Packaging News* (England). The companies mentioned are The Wiggins Teape Group, Thames Board Mills (a Unilever subsidiary), Bowaters and Reeds. An investment of £8- to £12-million is envisaged. Capacity would be 70,000 to 100,000 tons of pulp a year, much of which would be used in Scotland. Some 12-15 million cubic feet of pulpwood would be used. Scottish Pulp (Development) Ltd. has been registered to investigate, plan and negotiate the scheme. "Background to the project," says *Packaging News*, "is the belief of British papermakers that they are at a disadvantage in competing with Scandinavian mills because of the latter's access to home-grown pulpwood. It is in packaging papers and board that these fears are most widespread," the article continues, "for newsprint already enters Britain free of duty." Scandinavian papermakers express the view that these fears are ungrounded, pointing out that total capacity of Sweden's paper and board industry is less than half of Britain's consumption.

ENGLAND

Gabled-top case keeps dresses right-side up

A clever way to assure ready-to-wear arriving right-side up is seen in the design of a gable-topped corrugated fibreboard shipping case developed for a British sportswear manufacturer. According to *Packaging News* (England), the container will hold 25 garments hanging on a heavy rail stitched inside the gable top of the case. Since the dresses do not have to be folded, they arrive at their destination ready for display without pressing. And the pitched top prevents shippers from handling the unit any way but right-side up.

FRANCE

Train tours to demonstrate materials handling

Under the auspices of the National Railroads of France and the French Materials Handling Information Center, a special train toured cities in the east and southeastern sections of France during the early summer to demonstrate latest techniques in materials handling and packaging to specialists invited to visit the train when it stopped at each station along the route. Two cars, according to *Emballages* (France), were reserved for packaging, one for exhibits by manufacturers of packaging supplies, the other for exhibits prepared by the General Packaging Laboratory and the French Institute of Packaging & Processing. Conferences at each stop dealt with problems of materials handling, both manual and mechanical, related to rail transportation and the most modern techniques of protection in transit.

ENGLAND

Lock-cell paperboard apple pack

An idea that might be adapted for other items requiring individual compartments in a multi-unit is suggested by a retail package for apples, reported in *Packaging News* (England). The package of folding paperboard construction folds flat, but opens to provide a separate compartment for each apple when the packer presses its sides. The container is supplied as a creased rectangular blank with die-cut slits in the center. To assemble the container, the blank is first folded into a triangular-section sleeve and locked with two large tabs and slots. By pressing the side wall of the triangular sleeve, the packer causes the board sections on either side of each slot to fold outward, forming a collar for each apple. When pressure is released, the collars grip the apples that have been dropped in. Actually, the apples hold the slots open so that each is held firmly in its cell, but can be removed in the same way that it was inserted without unloading or breaking the container. Tests indicate bruising is kept to a minimum because no apples are in contact with the walls of the outer container. The container blanks are being made in three different sizes to hold either four or five apples of different diameters.

ENGLAND

American-style drug store in Britain

What is reportedly the first British drug store on the American pattern was opened in South-West London several months ago, according to *Sales Appeal* (England). It is distinguished from the traditional English chemist's shop in that it has soda fountain, coffee bar, hamburger grill and carries confectionery, toiletries, stationery, toys, nylons and a great variety of such types of products.

For additional information, write: World Report Editor, MODERN PACKAGING, 575 Madison Ave., New York 22.

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These foil packages blaze with SELL . . . they protect the fine products you see on this page.

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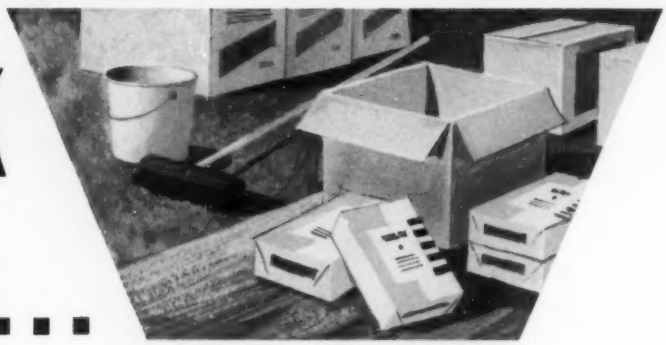
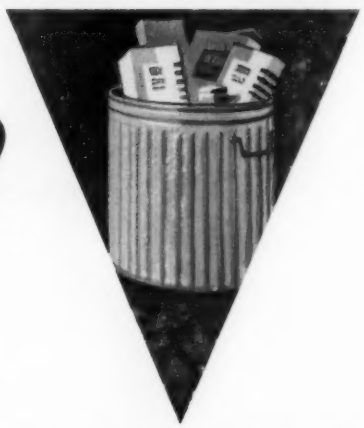
Where will your product be in 1961?

TOP SHELF...

BACK ROOM...



OUT?



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your only guarantee that the packaging machine you're buying meets your requirements.

Montag Bros., Inc., Atlanta, Ga. uses three Hayssens to wrap notebook fillers in polyethylene. Five other Hayssen machines are used to wrap the other paper products.

Wisconsin Tissue Mills, Menasha, Wis. uses this Hayssen to wrap their twin and single napkin pak. Other Hayssen equipment wraps placemats and other products in poly and other films.

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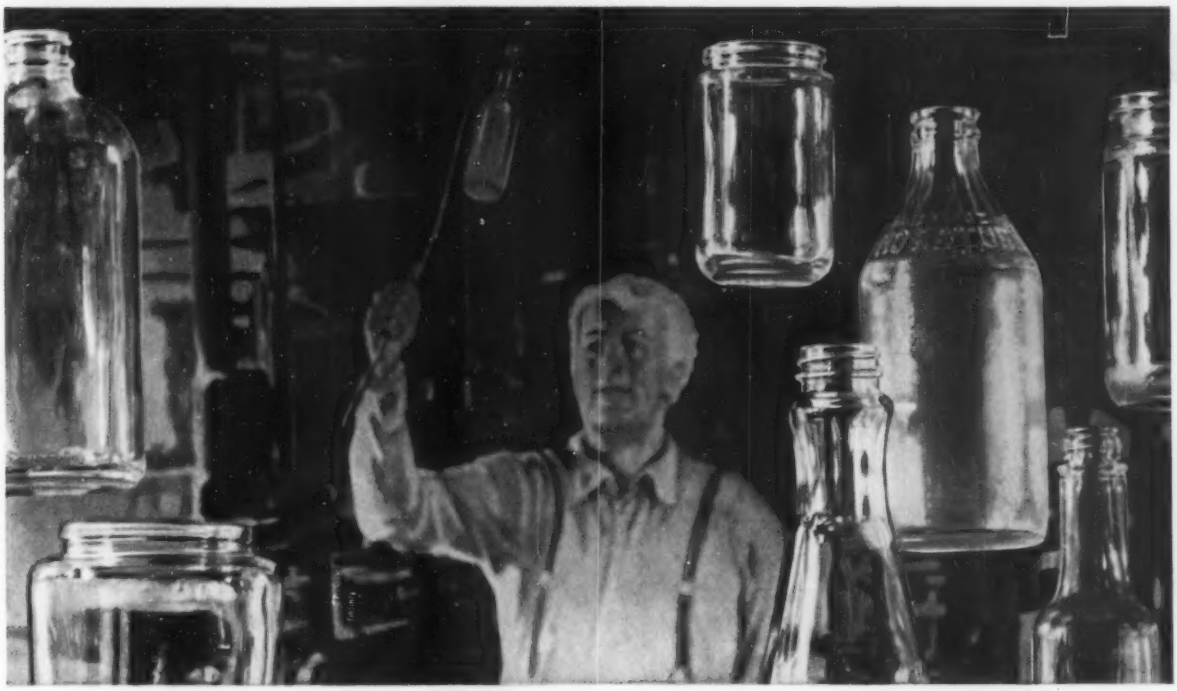
Glass manufacturing looked like this the year "Mike" Owens was born

The machine he invented revolutionized the glass container industry

This year—the average American will use more than 400 glass-packed items



The 100th Anniversary of Mike Owens' birth

He led the way to our wonderful world of glass

Michael J. Owens was the Owens of Owens-Illinois. He invented the first successful automatic bottle machine in 1903. And this year, the 100th anniversary of his birth, Mike's influence is felt in the daily lives of almost all of us.

His machine led to mass production of the millions of Owens-Illinois glass containers we use today. Foods, beverages, medicines, chemicals, toiletries—so many *different* products are packaged better in glass.

Mike's invention also meant more job opportunities, with better working conditions. By 1919 the National Child Labor Commission had written "... your machine has done more to eliminate child labor than all our legislation." When he died in 1923, he had revolutionized an industry.

With its multitude of products made from glass, plastics, paper, wood and metal, O-I has expanded its services in many directions. Yet the adventurous curiosity which led Mike Owens to devise a new way to make bottles still guides the thinking of Owens-Illinois.

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AN (I) PRODUCT

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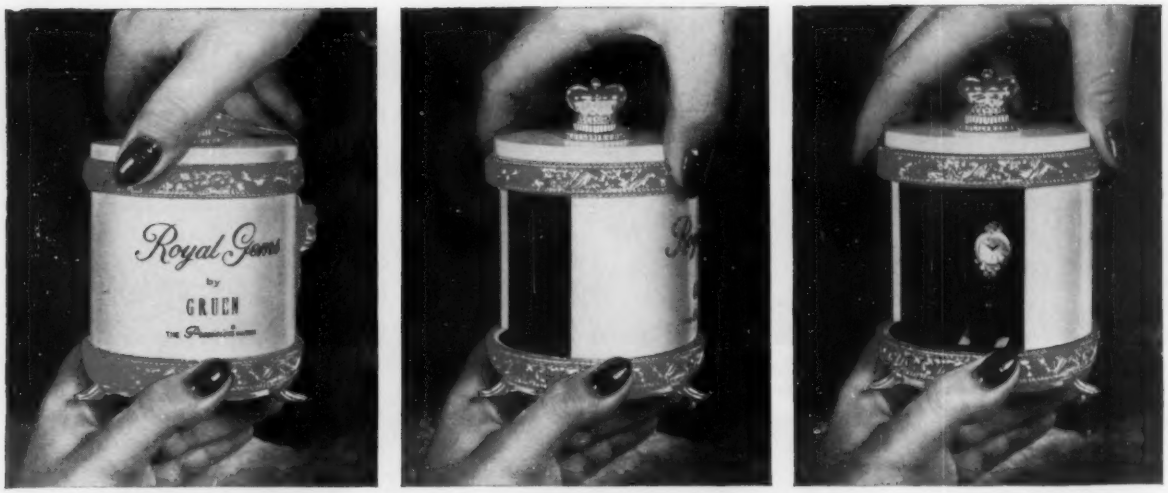
GENERAL OFFICES · TOLEDO 1, OHIO



There's a new twist to Gruen watch boxes

A gentle twist of the top, and this tightly closed package opens to reveal the "Royal Gems" — a sparkling new GRUEN watch.

Appropriately, the Royal Gems are housed in plastic fit for a king . . . DYLENE® polystyrene. DYLENE is especially suited to applications like this, where plastics are called upon to perform; to turn, to hinge, to pivot, to fit precisely, piece after molded piece. Smooth operation calls for excellent dimensional stability. DYLENE has it.

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For complete information on DYLENE polystyrene, write to Koppers Company, Inc., Plastics Division, Dept. MPG-119, Pittsburgh 19, Penna.

The GRUEN box was designed and manufactured by Custom Manufacturing Company, Jersey City, N. J. Colors: white and gold

Offices in Principal Cities · In Canada: Dominion Anilines and Chemicals Ltd., Toronto, Ontario

KOPPERS PLASTICS

DYLITE® expandable polystyrene, SUPER DYLAN® and DYLAN® polyethylenes are other fine plastics produced by Koppers Company, Inc.

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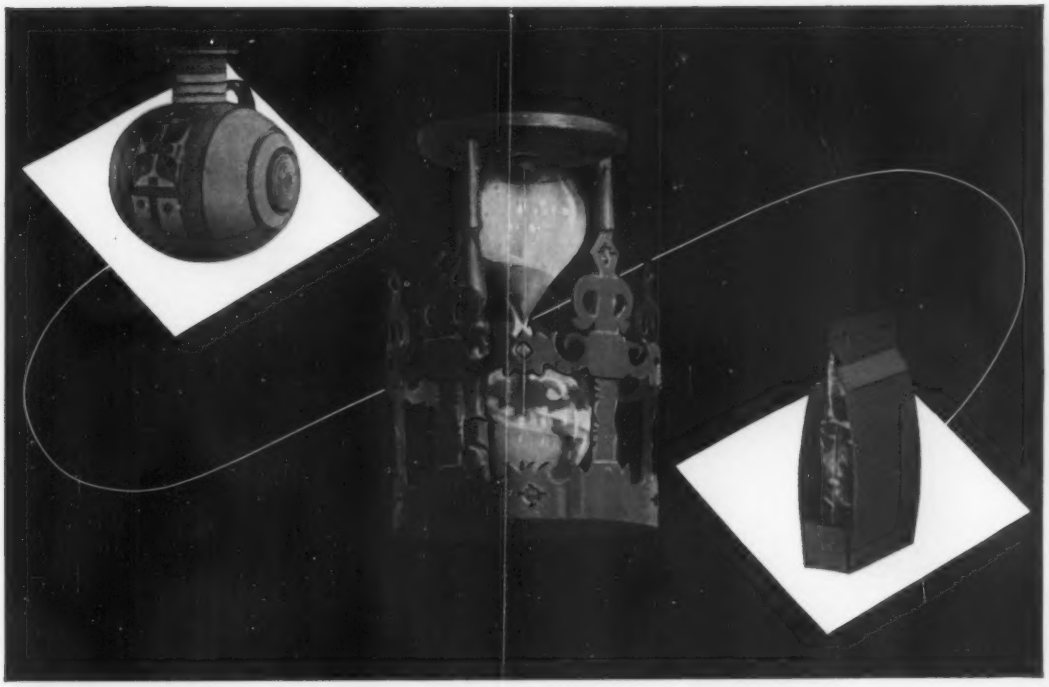

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Contact us now for further details and samples of our films. And if you need practical help to use them to best advantage, we are ready and keen to co-operate with you.

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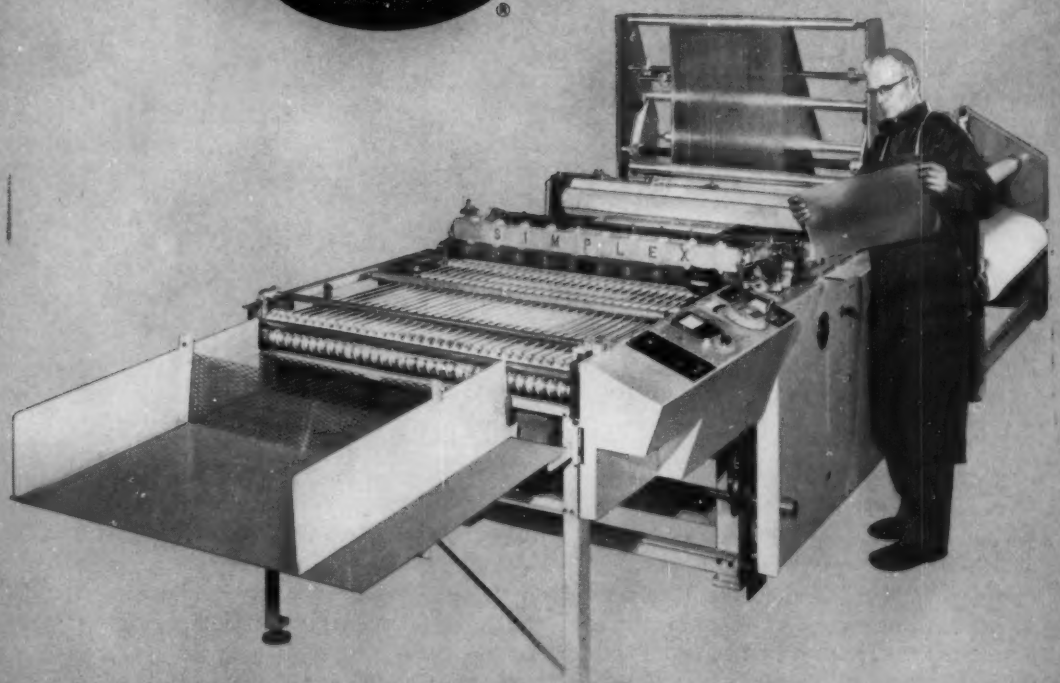

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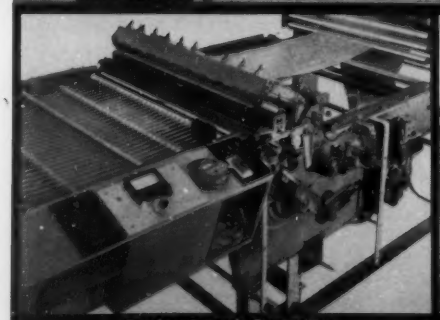
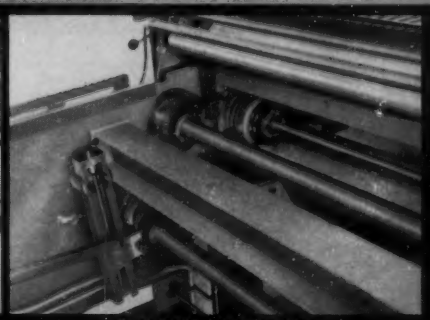

Feather-Smooth Operation


Rock-Ribbed Construction

For left: View of control side of machine with covers removed. Shows sealing jaw in raised position, and water cooler down.

Left: Internal cam adjustments and brake unit. Note variable cam for dwell time adjustment, adjustable arm and cam for film compensator, electric clutch and brake.

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Editorial Memo

A big month brings the 13th issue

There are times each year when packaging men, like most businessmen, are as a group even more pre-occupied with their own field than usual. A national show, a forum, even local and regional meetings generate these periodic concentrations of interest.

This year, November is one of those months. In the week of Nov. 16, PMMI's third Packaging Machinery Show should attract 15 or 20 thousand to New York's Coliseum. The Packaging Institute's concurrent annual Forum will draw hundreds to the Statler-Hilton. Whether it is to see packaging equipment primarily or to hear about some phase of packaging generally, it is evident that they arrive with a sharpened appetite for packaging information.

In the midst of this stimulated interest, we have our own fillip: an extra, a bonus—our 13th issue. This bigger and ever-better *Encyclopedia Issue* starts into the mails this month on its way to paid subscribers. "Bigger" in its 5½ lbs., "better" in its 818 pages, it packs between "more-beautiful-than-ever" full-color hard covers a year's effort to compile the most authoritative and useful packaging information—not for a week or even a month, but for year-long use by every packager.

In every month of the calendar, packagers will find use for the charts, tables and Buyers' Directory that make this the "work book" of packaging. Supporting such basic reference information are more than 100 articles, one-third of them brand new this year, all others thoroughly revised and updated.

Packaging men of the type attracted to the Machinery Show will find in the *Encyclopedia Issue* such topical new material as "Production Challenges Ahead," as well as a round-up on the latest packaging developments, plus solid information on "Engineering the Packaging Line," on new cartoning equipment and on new heat-sealing techniques.

There are new packaging statistics for the decade of the '50s, a unique 2,000-item guide to contract packaging and a practical checklist for package planning. Our Technical Editor offers original material on how to interpret the properties ratings of films.

And from the ranks of exhibitors at the Machinery Show and the annual National Packaging Show come many of the advertisers in this *Encyclopedia Issue* with basic news and information in their copy about the materials and equipment available throughout the year to smooth your packaging progress.

Delivery of the *Encyclopedia Issue* for 1960 to your desk will be, therefore, more than just a periodic event. It will provide a year-long exposure to the whole field of packaging, a place to concentrate your personal and company attention on the profitable practices of a 16½-billion-dollar business, sixth largest in the U. S.

The Editors

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November 1959 Vol. 33 No. 3

MODERN PACKAGING

RESURGENCE IN MACHINERY

Seldom has such widespread activity in new machinery swept the packaging field, as evidenced by new concepts in equipment to handle plastics and simultaneous trends toward integrated high-speed and slower but more versatile packaging units

Not since the early 1930s, when the advent of cellophane changed the course of packaging, has there been such a surge of new development in packaging machinery as can be seen today in the drafting rooms and on the assembly floors of suppliers of mechanical equipment across the country.

What's happening behind the scenes goes far beyond what has been published—beyond what will be seen at the third PMMI Machinery Show at New York's Coliseum this month.

Unlike earlier, more localized progress, the present wave of activity affects virtually every type of packaging equipment produced in the United States. So rapid is this progress in machine design that some types of new machinery are said to have been outdated before they were even amortized in plant installations. In a few instances, of course, modifications will serve to update existing equipment, but the most striking advances are in brand new or completely redesigned units.

Many of the dramatic changes in packaging machinery have been reported in MODERN PACKAGING. But even more exciting machines are yet to come. And it is from the prototype units which are now under construction that facts for this report

Crowded production floors *of machinery-supply companies point up the surge of activity in new packaging equipment that is sweeping the field.*

PHOTO PNEUMATIC SCALE

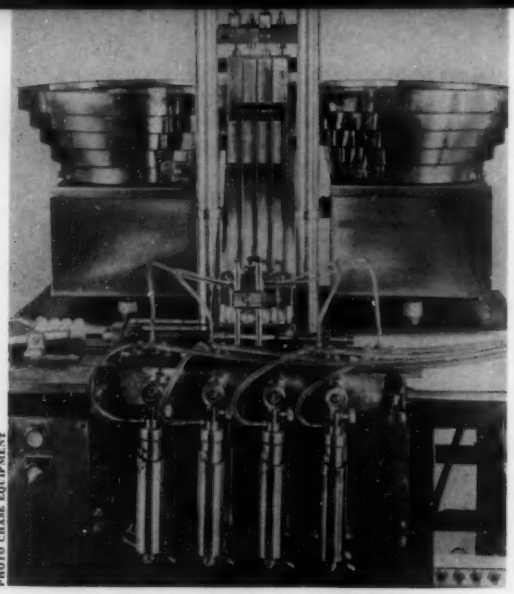


PHOTO CHASE EQUIPMENT

Small plastic bottles *are sorted and filled in one step on a compact new machine just installed at one pharmaceutical company. Vibrating feeders (top left and right) align containers, which are turned right-side up by fingers behind blocks in vertical center tracks. Piston fillers (bottom) inject the product charge.*

are drawn. To help packagers wanting further information, suppliers are identified in the text parenthetically, wherever possible. Lack of identity indicates that the development is still confidential.

Pattern of progress

Analyzing the whole field of machinery development, three broad trends are evident:

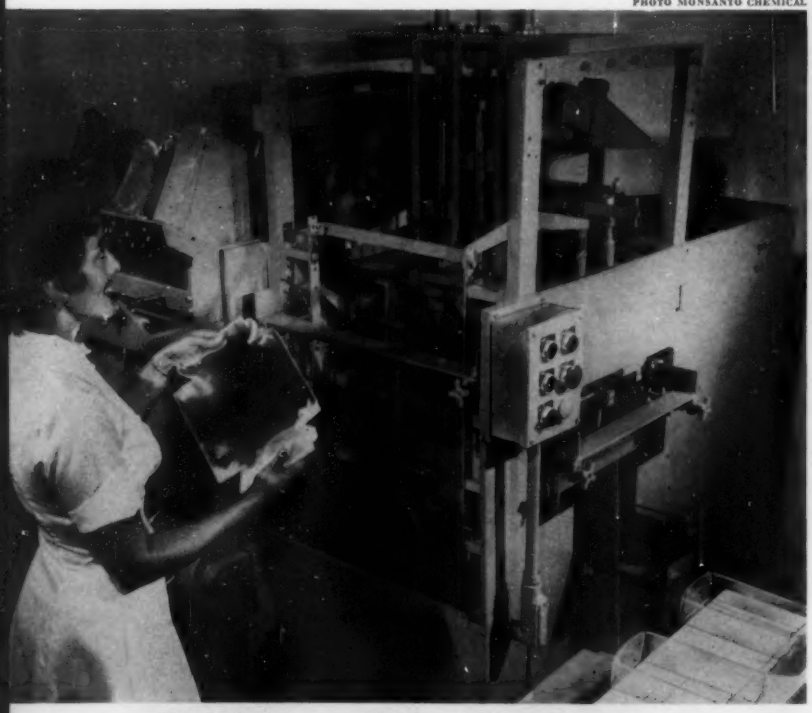
1. Machinery for handling plastics is increasing in scope and capacity at a rapid rate. Radical approaches in design are being tried in some cases to meet the special requirements of these new materials and containers.

2. Increased speed—a perennial trend since World War II—has made striking gains in many areas, but is being engineered now in context with such other factors as automation, integration, overall line efficiency, lower maintenance costs and less waste of packaging materials.

3. Lower-speed equipment with wide flexibility

New machines for rigid plastics

PHOTO MONSANTO CHEMICAL



Plastic blanks *are cold formed on a radically new unit that turns out transparent trays (lower right) with a locking-tab construction that resemble paperboard containers. Aim of this unique development is an all-plastic folding carton.*

PHOTO KARL KIEFER MACHINE

Polyethylene bottles *for P&G's Joy are gravity filled and conveyed at high speeds. Almost no pressure or vacuum can be used on these easily collapsed bottles, hence the need for special equipment to handle such rigid plastic containers.*

of adjustment and operation is making rapid gains to meet a counter need for automatic packaging of special containers and the increasingly popular premium and deal combinations.

Behind the boom

The emergence of plastics in forms that challenge most established packages and materials has created the key trend in mechanical development. These materials—chief of which so far is polyethylene in both film and rigid form—require imaginative handling, filling, sealing, capping and wrapping equipment. Caught almost unaware by a flood of new polyethylene films two years ago, machinery men have now come to grips with the problems posed by thermoplastic wrappers and are also anticipating packagers' demands with unusual new mechanical techniques for bottles, tubes and the cold forming of plastic sheet.

Yet, plastics are not the only reason for the current boom in new packaging machinery. Skyrocketing labor costs have led to a generation of sophisticated packaging-line production men who start with the premise that hand-assembly labor and other hordes of operators and inspectors on the production line are abhorrent.

With the development of machines that eliminate all hand labor, these sharp-penciled cost analysts have gone on to require ever higher speeds to gain further economies in packaging production. Now accessories for closer production control, automatic lubrication systems and devices to perform such peripheral packaging operations as coding and counting are in hot demand to satisfy the second packaging trend—better efficiency in packaging through complete utilization of floor space, pinpointing of maintenance and reduction of waste.

A key sign that this trend is gaining momentum is the increasing use of integrated machines which combine a number of packaging functions into one single compact machine.

Machinery men have almost never failed to react to the demands for speed. Operating rates have soared during the past 15 years—in many cases to the point where direct human control must be replaced by electronics and, in some cases, well beyond practical application. Complex mechanical actions have been steadily simplified, often by the introduction of rotary motion. Turns and twists have been eliminated in favor of straight-through flow. Centralized automatic-lubrication systems are becoming commonplace. All are aimed at eliminating human attention while assuring faithful day-in, day-out performance of the whirling juggernauts.

The third trend in equipment—versatility in one machine—is caused mainly by recent changes

Sparking the new developments in packaging machinery are these...

CAUSES:

- Challenge of plastics materials and their handling problems
- Increasing labor costs
- Demand for greater output
- Need for merchandising flexibility

creating these...

TRENDS:

- Newly engineered equipment to handle plastic containers
- Increased packaging speed combined with automation, higher efficiency, lower maintenance cost and reduced materials waste
- Integrated motion that combines many packaging functions in one unit
- Rotary motion that will simplify mechanical action
- More versatile, flexible designs

resulting in these...

MACHINES TO:

- Shape cold-formed, bioriented polystyrene sheet to make packages without pre-scoring or heat
- Produce lightweight, low-cost liquid-holding containers from a variety of combinations of materials
- Heat seal thermoplastic films without the problem of sticking
- Handle blow-molded polyethylene bottles efficiently
- Open, fill and close shipping containers on one piece of equipment
- Form paperboard shipping cases around a load of product containers
- Form and overwrap cartons in a single integrated machine
- Spot label at 2,500 per minute
- Multipack in a greater variety of package combinations
- Label glass and metal by heat transfer

in the marketing patterns of even large-volume packaged products, which has resulted in a paradoxical need for slower but more flexible machinery, capable of handling a multiplicity of package sizes or types. This same type of machinery admirably meets the needs of small-volume packagers.

Packagers of big-volume, standard commodities find that low price and widespread distribution are not enough to meet competition in the supermarket era. As product lines are broadened to include premium and middle-range goods, deals, premiums and fancy packages must be utilized to whet consumer appetites and even the biggest sellers must have packages that are capable of being adapted for special-purpose merchandising.

Yet economics prohibit hand assembly of these short-lived promotions. Hence the need for—and development of—ingenious equipment that can be readily converted from one packaging task to another. Even here, low speed is not generally considered an asset—and is tolerated only until higher speeds are attained.

As an interesting sidelight on this trend, there are some packagers—and indications are that their number is growing—who prefer multiple installations of slower-speed equipment rather than a single high-speed machine. These experts argue that multiple machine installations assure all-around flexibility and are insurance against the complete stoppages that occur when a single machine breaks down.

However, with floor space increasingly at a premium today, most large packagers are found to favor elimination of multiple machines and adoption of more compact, high-speed, integrated lines.

Equipment for handling plastics

While the need for machines capable of handling thermoplastic packaging films was the catalyst in developing active interest in many plastics among machinery men, they have quickly pushed mechanical improvements far beyond simply adapting a standard packaging technique to a new material.

Most radical example of the new thinking is a just-announced method for cold forming bioriented polystyrene sheet (Plax), which is bent to shape in much the same manner as metal, without the use of either pre-scoring or heat. First result of this technique will be a tray with locking tabs—a crystal-clear or colored plastic container that gives total visibility at, reportedly, only slightly higher prices than fancy folding, window or set-up boxes. Ultimate aim of this technique, still some distance away, is a complete folding carton that will be formed from a variety of plastics to suit product requirements.

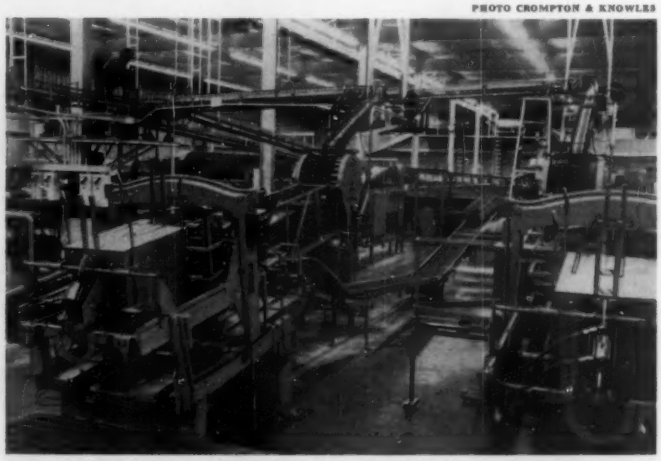
A machine to form trays in the packager's plant is already built (R. A. Jones). A carton former is on the drawing board. The basic mechanical trick for either machine is complete containment of the plastic sheet, plus overfolding of the container sides, which return to the 90 deg. angle because of a natural "memory" of the plastic. Foolproof locking

Streamlined equipment for automatic casing

PHOTO EMHART MFG.

Tray packaging *of six-packs of canned beer is a straight-through operation on a new automatic machine now installed at Burgermeister Brewing Corp. Multipacks are assembled in groups of four and slid on tray blank, which is then folded and glued around the product load.*

PHOTO CROMPTON & KNOWLES



Casing *of loose cans in top-loaded shippers at Schlitz Brewing Co. is accomplished with a new automatic machine that opens case, tilts it onto loading horn of casing machine for filling, then turns case upright for flap sealing. Cans enter loading machine through indexing wheel (center).*

tabs are engaged by extreme distortion of the sheet during folding, resulting in a closure that is virtually indestructible.

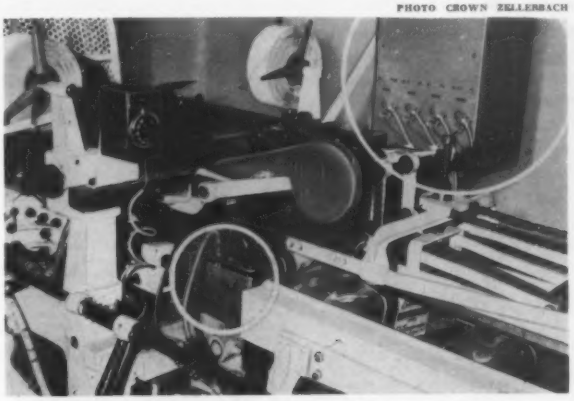
Machinery men and suppliers of conventional materials are not being stampeded by the developments in pure plastics, however. Ingenious new combinations of plastics with such common packaging materials as paperboard, foil and other metals are constantly being adapted to forming, filling and sealing machinery. The first fruits of this marriage are already in commercial use (Crown Zellerbach, Fibreboard Paper, Pneumatic Scale) and machinery now under design is soon expected to produce lightweight and relatively low-cost packages that will be impervious to even the most corrosive or penetrating liquid products.

Even the development of overwrappers for thermoplastic films is in a state of flux. While at least seven companies have successfully modified machines to handle plastic film (AMF, Battle Creek, Crompton & Knowles, Hayssen, Hudson-Sharp, Oliver, Package Machinery)—in some cases at cellophane-wrapping speeds—machinery men and suppliers are not satisfied. Now in the works is a fresh approach to the whole problem in which the key element, reportedly, is an anodized aluminum heat-sealing bar that is impregnated with molybdenum sulfite—a simple resistance-heating mechanism that is said to eliminate sticking of thermoplastic films and the need for elaborate mechanical components used on present overwrappers.

But even conventional sealers have been greatly improved and several compact heat-sealing attachments for conventional overwrappers—designed to convert this equipment to polyethylene—have recently been designed and are now in use. Many of the modified wrappers also handle polypropylene, vinyl and other thermoplastic films.

These successful heat-sealing techniques have also been duplicated for three other new materials that show great packaging promise—bioriented polystyrene, polyvinyl alcohol and methyl cellulose films. Here, machinery men and film converters

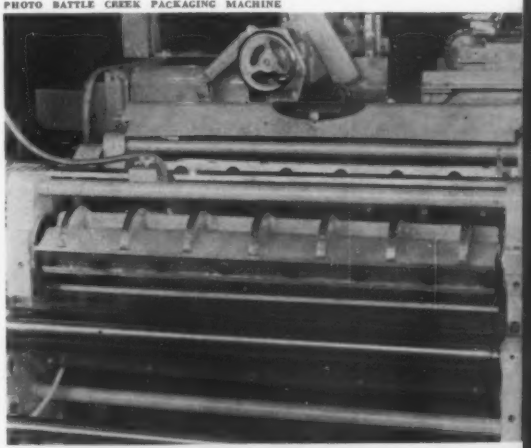
PHOTO CROWN ZELLERBACH



Sensitive controller (*circle, right*) *closely governs temperature on pre-heated folders, dead plates and rotary belt sealers* (*as at circle, bottom*) *in this bread wrapper, which has been modified to handle polyethylene film.*

New attachments for thermoplastic film overwrapping

PHOTO BATTLE CREEK PACKAGING MACHINE



Perforator *for polyethylene film is another of the many new attachments for a film overwrapping machine. Producing a simple easy-opening device where a hermetic seal on the package is not necessary, it consists of a rotary mechanism that works against a fixed knife. Component is located on film-feed part of overwrapper.*

Tear tape *for polyethylene film is applied to web automatically by this prototype unit, which is designed as an attachment for overwrappers. Polyethylene-coated polyester tape is continuously heat sealed by impulse shoe* (*center*) *and can be positioned wherever desired on web.*

PHOTO UNION CARBIDE PLASTICS

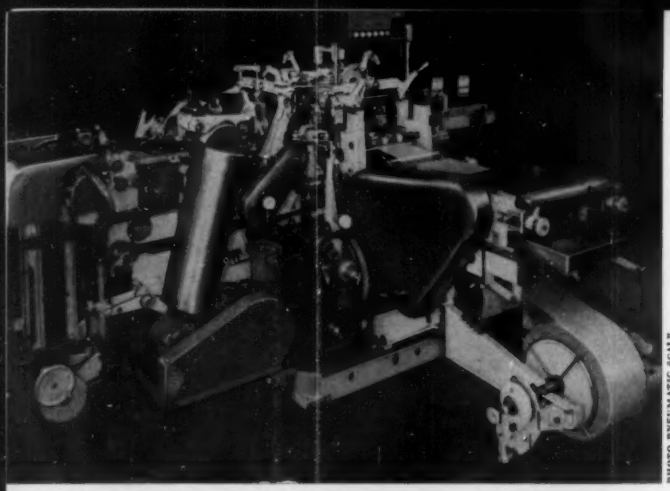


PHOTO PNEUMATIC SCALE

High-barrier carton *is formed on this new integrated packager, which may find wide use in protective packaging of moisture-sensitive products. The unit forms a foil liner on a mandrel, slides it into a carton for filling, then hermetically seals the package.*

have worked cooperatively to solve the problems of running these difficult films—polyvinyl alcohol and methyl cellulose being limp and clinging, and bioriented polystyrene being stiff and easily burned. Polystyrene film can now be heat sealed on standard overwrappers without the use of a solvent. Both polyvinyl alcohol and methyl cellulose have been run on conventional unit packagers.

For plastic bottles

Having faced up to problems created by the surprising appearance of many plastic films, machinery men have been better prepared for the next big trend in plastics—the use of blow-molded polyethylene bottles for their utilitarian properties as well as for their known squeeze function. These containers are on the verge of capturing some truly big-volume applications,* yet before these uses occur, the necessary handling equipment either has been commercially produced or is now in the prototype stage awaiting only a packager's order.

It is fortunate that development problems on machinery to unscramble, convey, fill and close plastic bottles have already been worked out, because these containers pose special difficulties not encountered with glass. Polyethylene bottles are:

1. Extremely light weight and tend to bounce or tumble when moved.
2. Frequently unusual in shape and size.
3. Easily collapsed under conventional vacuum-filling techniques.

Already in use are at least three types of automatic unscramblers that overcome the problems of light weight and odd shapes (Chase, Pneumatic Scale, U.S. Engineering). And there are several more units in the prototype stage. All of the present machines utilize hopper and elevator mechanisms for unscrambling the bottles. Two units utilize mechanical fingers to orient the containers in an upright position; the third employs a canted, spinning table similar to those used in cap unscramblers.

Conveying of the plastic containers is a major problem, since many bottles are oval in cross section and tend to bridge between guide rails. Special designs and the strategic location of air jets have solved most of these problems. Now on the drawing board and in prototype construction are even more radical conveyors employing brushes instead of steel belts and containing vacuum parts that will hold the bottles to the metal conveyor and prevent any shifting of position.

Filling and capping machines—plus other special equipment for inserting plastic dip tubes and nozzles—were among the first units to be adapted for plastic-bottle lines (Chase, Consolidated, Karl Kiefer, Pneumatic Scale). The easily collapsed containers make the use of vacuum fillers impossible, so low-pressure or gravity fillers have been produced to handle the job. These machines must also be adjusted to avoid excess pressure on the tops of the containers. By putting a better finish on bottle threads, molders have reduced the problem of capping polyethylene bottles.

To complete the bottle picture, various types of automatic casing machinery are rapidly being converted to handle plastic containers; the first unit reportedly is already in use (Emhart). The major problems in adapting such equipment are the high sliding friction and odd shapes of the plastic containers. The first commercial solution to these problems utilizes a drop-type caser with an added automatic feeler and gate to detect each bottle and switch it into the proper loading channel.

Tube filling and sealing machines with high-speed electronic sealers are now being built (Carbert)—to be ready for two new types of vinyl tubes that are expected to be introduced by the end of the year.

Increased speed and efficiency

As line speeds increase, more and more individual packaging operations are being integrated into single machines. This keeps the package under continuous control and frequently enables a single drive system to be used for all mechanical actions—a simplification that sidesteps the complexity of electrical interlocks and also reduces the cost of equipment. It also eliminates transfer mechanisms and conserves valuable floor space.

Prime examples of this trend are, of course, the horizontal forming, filling and sealing units for plastic bottles and trays (Conapac, Leedpak), shown earlier this year at the AMA Packaging Show,

* See "Big Push on Plastics," MODERN PACKAGING, Oct., 1959, p. 109.

which combine the converting step of thermoforming the container with the normal filling and heat-sealing steps performed by the packager.

But there are many others. Perhaps the latest type of equipment to be influenced by the trend is machinery for opening, filling and closing shipping cases. In contrast to the traditional three separate pieces of equipment, units now in development—and even installed in a few plants—combine all three functions in a single, automatic machine (Crompton & Knowles, Emhart, Ferguson, Jones).

The biggest news in this area, however, is the development of new kinds of shippers which are constructed of lightweight kraft board and even kraft paper instead of conventional corrugated material. These containers, which have reportedly been given ICC approval for some applications, are formed around the load of product containers or are slipped on like a sleeve on two types of machinery (Hayssen, St. Regis) that are being secretly tested by some leading packagers. Other equipment manufacturers are hot on the trail of this development, too, and have both automatic and semi-automatic machines well along in development.

This surprising development in shippers, however, is not expected to reduce the use of corrugated, which also is benefiting from utilitarian changes. Some of the new automatic handling machines for corrugated shippers are being built to accommodate both top- and end-loaded cases.

Wherever possible, straight-line motion is used to save space and reduce complexity. Most of these new machines are designed for end-loaded, single-tier cases which all machinery experts insist will soon replace double-tier shippers because of the price-marking convenience demanded by supermarkets. End-loaded designs for cases are expected to become much more popular because of the tremendous cost savings—as high as 30%—derived from use of these shippers, which require less corrugated board. Automatic tray formers and loaders for beer cans are now in use (Emhart, Jones) and more are being designed because of the increasing popularity of open shippers for local distribution.

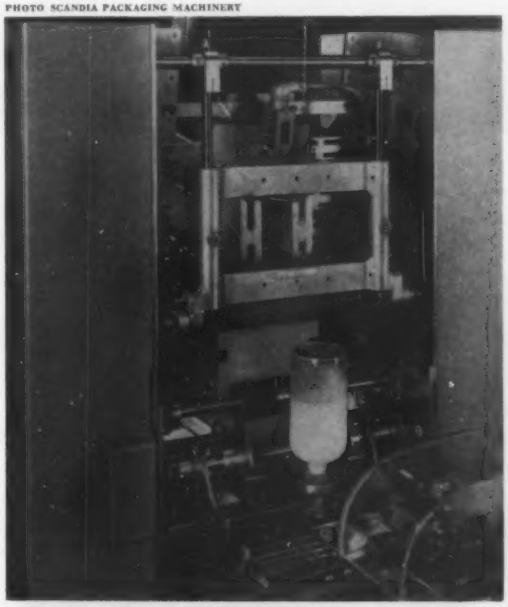
Another example of integration that is sure to gain headway is a combination of carton-forming and overwrapping actions, which was seen first in flip-top boxes for cigarettes and has now been adapted to a brand new machine for assembling and wrapping five-pack cartons of cigars (Scandia). This unit, which forms pre-cut carton blanks around a mandrel carrying the cigars and then overwraps them in cellophane in one short, straight-line motion, boosts packaging speed and materially decreases the floor space and number of mechanical actions needed for these two packaging operations.

Frozen-food packers have been prominent in demanding higher speeds for their lines. And there are carton set-up, filling and closing machines now in the works that will boost operating speeds in this field from present 200-per-minute rates to 300 and even 500 packages per minute. Promising among containers for these high-speed lines are the single-barrier frozen-food cartons, whose number and efficiency are steadily increasing. By eliminating the overwrap, they remove one of the major obstructions to super line speeds.

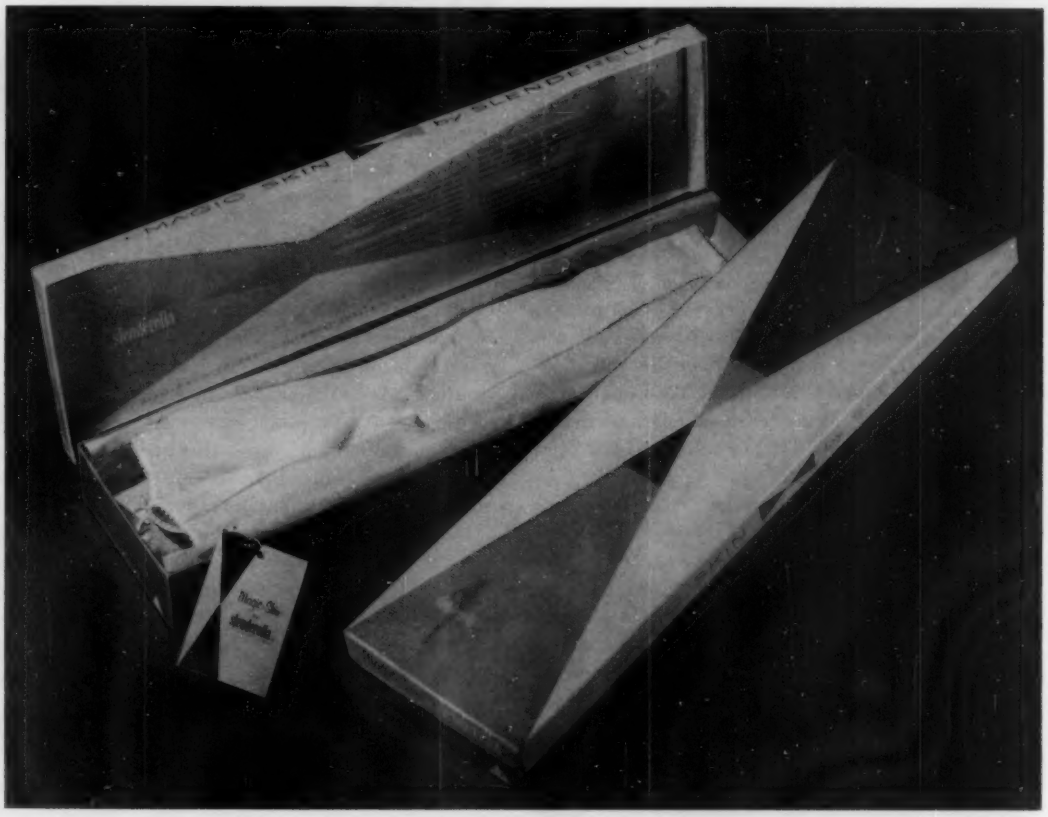
Rotary mechanical action—the key to many new improvements in speed and efficiency—is responsible for a startling advance in labeling machinery. One compact unit (3M), rated at a possible 2,500 labels per minute, is so fast that no application has yet been found to field test its capacity. Here, rotary action has been utilized for all overhead feed and cut-off motions, with a high vacuum serving to keep the pressure-sensitive strip labels under complete control for accurate positioning. The package to be labeled trips a cam to initiate the action.

Overhead mechanisms that require the speeding package to do part of the machine work have also been utilized in another new machine—an overwrapper now being tested on single cigar packs that has been clocked at 200 [*Continued on page 245*]

PHOTO SCANDIA PACKAGING MACHINERY



Dual-function packager *assembles five cigars and folds the carton blank around them, finally overwrapping the whole package with cellophane. Machines that combine functions offer special cost-saving advantages and are increasing in every type of packaging equipment.*



The girdle hurdle

Typically, the upstairs department scorns the self-help packaging that sells cheaper wares downstairs. Here's how one packager won over the upstairs with boxes tailored to its needs

Those of our readers who don't wear them will probably be interested to learn that there are such things as upstairs girdles and downstairs girdles. Around this class distinction there is swirling a packaging controversy which involves principles applicable to many other department-store items.

Strange as it may seem in this day and age, there are certain department-store elements who say they don't *want* sales-help packaging. These are the "upstairs" departments in which there is a long tradition for personal fitting and personal service. Personnel in such departments seem to feel that the need for their existence would disappear if anything like self-selling, open-display packaging appeared.

In the case of girdles, the battle line is drawn at the $6 price mark. Anything under $6 is usually individually packaged in informative folding boxes and sold from self-selection displays on the main floor; anything above that price goes into the upper strata of the upstairs personal-fitting salon and is stocked out of view, in shelf boxes.

This was the dilemma facing Glamorize Founda-

High-style appeal *is achieved by tie-in with Slenderella name and smart box-wrap design printed on high-gloss paper stock. Complete product information is placed inside cover for the saleswoman's exclusive use.*

tions, Inc., New York, when they sought to package an $11 girdle for national distribution through upstairs foundation-garment departments.

The company took its problem to an independent design firm. Obviously, the project called for high-style packaging to upgrade the "upstairs" prestige line and differentiate it from the company's existing "downstairs" line.

The problem was tackled at a time when a retailer study by a leading corsetry publication revealed that buyers and salespeople in upstairs foundation-garment departments were highly critical of individual packaging, saying that it slowed down sales, caused confusion in stock rooms and was mostly unsuitable for display in selling areas.

Convinced that this criticism was not pertinent to the concept of packaging itself, but to the kinds of packaging in use, the designers went to department stores, interviewed buyers and salespeople and made extensive observations of selling procedures. Here is what they found out:

- Saleswomen are greatly aided by manufacturers' sales messages on packages—often the only place they can get essential information about a garment.
- Two-piece boxes often result in size confusion, particularly when covers get switched.
- Packages from which it is easy to remove and replace a garment encourage salespeople to show a particular brand.
- Downstairs brand names, no matter how successful for low-price garments, cannot be used for upstairs prestige merchandise.

The new package, which Glamorize says already has every indication of making the new garment one of the leading girdles in its price range, with new entries into prestige markets reported daily, has been developed on the basis of these findings.

By featuring the name "Slenderella" on the package (through a royalty arrangement with the popular reducing salon), the company has created the kind of consumer appeal which upstairs departments apparently like. Since retailers say few garments are shown to the customer in the package and that packages are not usually displayed in selling areas, no selling copy has been placed on the outside of the box. A design motif of two intersecting triangles is arranged simply to convey graphically that the box contains a garment that "holds you in at the waist." The brand name "Slenderella" is combined with a small silhouette figure at the lower left corner of the package face.

All selling information is printed *inside* the box cover, where it can be read by the salesperson when serving the customer. Because the hinged cover stays permanently with the box, there is no confusion of size information.

The full name, "Magic Skin by Slenderella," is emphasized in sans serif lettering along with a repeated symbol of the two intersecting triangles on the edges of the cover. Colors are gold and gray on white high-gloss stock, printed alternately in fine lines to form the body of each triangle.

The package was introduced simultaneously in three markets: Washington, D.C., Los Angeles and Chicago, with extremely favorable response in each, says Glamorize. Since then it has been moving into leading department stores across the country that previously never carried this firm's line.

This kind of attention to the special requirements of "upstairs" selling apparently is breaking down resistance to packaging. The same leading trade journal which devoted considerable space a year ago to upstairs-corsetry's objections to packaging has more recently sought to answer these objections itself by teaching the upstairs people how to use packages more effectively. And the same principles can be applied to other high-style merchandise in which personal selling still holds out "upstairs."

SUPPLIES AND SERVICES: Package design and marketing research by Associated Industrial Designers, 95 Madison Ave., New York 16. Box wraps printed by Excelsior Printing Co., North Adams, Mass. Set-up boxes by S. Rappaport, Inc., 155 Ave. D, New York 9.

Hinged cover *eliminates cover switching and size mix-ups, simplifies handling for salesperson.*

Easy-to-pour *gallon carrier of shampoo is formed by enclosing the semi-rigid, spout-fitted polyethylene bottle in a lightweight corrugated carton with built-in handle. When completely folded into the top of the carrier, as illustrated at right, the handle's die-cut finger holes secure the caps of two bonus bottles of other Breck shampoos during shipment.*

83% lighter in plastic

Breck's rectangular polyethylene gallon is too thin to stand on its own, but a corrugated shipper-dispenser provides strength and service—at a saving of $20,000 a year

Weight savings of 83%—worth thousands of dollars per year in shipping economies—are being effected by John H. Breck, Inc., Springfield, Mass., with a new thin-wall plastic gallon bottle for shipment of its specialized shampoos to beauty salons throughout the country.

Made from high-density polyethylene, the blow-molded container, together with a new specially designed corrugated carrier and dispensing carton which supports it, cost 4% more than the previous round glass bottle and its heavier shipper. But the net saving after shipping is reported to be almost $20,000 per year, because of the lighter construction and a 31% reduction in cubage.

Development of this space-saving, rectangular plastic bottle is a significant new step in the movement toward adoption of polyethylene containers strictly for their utilitarian properties* rather than for squeeze-dispensing advantages. Because of the light weight and special folding construction of the new carrier carton, the bottle is said by Breck officials to provide extra ease in pouring. The tough plastic is, of course, virtually unbreakable.

*See "High-Density Containers," Modern Packaging, June, 1958, p. 92.

How the package fits together

Special folding construction *of carrier carton converts short dust flaps into locking tabs to hold the retaining platform in place around the neck of the plastic bottle. For dispensing, the main, full flap is removed by tearing on perforated lines and one dust flap, equipped with die-cut finger holes, is raised to serve as a convenient handle.*

The major part of the weight saving is gained in the bottle itself, which tips the scales at only 3 oz., compared with 42 oz. for a glass container of the same size. However, further savings have also been obtained in the carton which, despite its complex construction, is two-thirds lighter than the previous case required for glass. Made from 200-lb. B-flute corrugated, the new carton weighs only 8 oz., compared with 24 oz. for the previous container made from 200-lb. C-flute corrugated.

Total weight savings are about 3½ lbs. per package. Cubage of the carton has been reduced from the former 837 cu. in. to 567 cu. in.

As much as the bottle itself, carton design is a key to the success of the new package. Because of the thin-wall construction of the polyethylene container, any pressure on the bottle during opening would cause the contents to spurt. This flexibility of the plastic also prevents effective labeling. Thus the carton must carry company and product identity, and hold the bottle firmly during dispensing.

Breck has met this [*Continued on page 255*]

SUPPLIES AND SERVICES: Polyethylene bottle by Plax Corp., Hartford, Conn. Corrugated carton by Tri-City Container Corp., Troy, N. Y.

Modified filler *is switched from vacuum to gravity fill to accommodate the easily collapsed polyethylene plastic bottles.*

The Food & Drug crisis:

Five months ago, in the first of a series of three articles appropriately titled "Crisis: The New Food Law,"[1] MODERN PACKAGING warned of the staggering problems facing packagers in the then-new Food Additives Amendment to the Food, Drug & Cosmetic Act, which set a deadline of next March 5 for proof that no ingredient of a packaging material would migrate to foodstuffs in such form or quantity as to be dangerous to health.

What's happened since?

In an unprecedented demonstration of inter-industry cooperation, top officials of 41 packaging-supplier associations have held a series of meetings to discuss the impact of the law and to devise a program of joint action. Also, the Packaging Institute has just launched a "Regulatory Problems Committee." These efforts may result in two important activities: (1) practical assistance for affected suppliers and (2) an educational campaign to inform officials of the Food & Drug Administration—the enforcement agency—and such other interested Federal agencies as the Department of Commerce of the potential threat to the packaging field posed by the combination of short deadlines and stringent interpretations of the law by F&DA.

Of the 17 formal petitions for clearance filed in the Federal Register by F&DA as of Oct. 15, only two cover packaging materials as such.

One of the two packaging petitions seeks blanket approval for polypropylene. According to F&DA officials, this application by the Hercules Powder Co. has a good chance of approval. If so, certain unique technical and legal thinking that went into its preparation could, in some instances, provide a workable pattern to bridge the gap between the current rigid demands by the Federal Government and the very real limitations in test procedure which are faced by packagers.

Discovering the complexities of clearance work the hard way, many large packagers and suppliers are learning how to assemble legal, chemical and technological facts in short order and how best to present these data to F&DA, thereby creating "standard" procedures useful to all companies.

Shortly, F&DA will take an important step to help packagers by circulating to hundreds of "qualified experts" lists of direct additives and chemicals used in food-packaging materials in the hope that by a consensus of expert opinion these carefully selected compounds can be pronounced safe without the necessity for further testing.

Before the new amendment took effect last March 5, F&DA had confidentially approved certain materials—principally plasticizers and stabilizers. Officials of the agency admit they have voluminous files of data on these materials. But, of course, they cannot divulge the secret manufacturing data involved and they insist that they cannot even furnish trade or generic terms to identify these "sanctioned" materials despite assurances that packagers could be advised in such a published list that these sanctions were granted for specific applications to certain food products and would not necessarily be applicable to all foods. Many packagers feel that if they could get even this much of a clue to materials ruled "safe" in some instance, they would know a great deal more about their own chances.

But some of the "safe" packaging materials are gradually becoming known as suppliers advertise and talk to customers about their own previously tested products. Identification of these materials (e. g., Goodyear's Videne A, Pliofilm and food-grade Vitafilm; Celanese's acetate film and sheet) is expected to be very useful to packagers. But to date such assurances are private, must be taken on the supplier's own responsibility.

Observers see a perceptible softening of previously firm public and private statements in interpretation and enforcement of the new law by F&DA administrative officials as they come to recognize the complex technical and economic problems that

[1] MODERN PACKAGING, May, June and July, 1959. To date, more than 3,800 reprints of these articles, together with a July technical article on "Extractability Testing," have been distributed to 229 companies requesting them.

Realization of the implications of the Food Additives Amendment has stirred the packaging field to concerted action; progress is painfully slow, but the future is not without hope

HOW NOW?

are facing packagers trying to comply with it.

Although the law empowers the Secretary of Health, Education & Welfare to extend the clearance deadline another 12 months—to March 5, 1961—official pronouncements have made it clear that such lenience will be extended only in specific cases where a reasonable effort at proof of compliance has actually been made.

Basically, responsibility for compliance with the law rests with the packager. In actual practice, the packager in most cases is passing the responsibility back to the package supplier and the package supplier, in turn, looks to the raw-materials manufacturer for assurance. Thus, most of the anxiety and action are concentrated in the supply end of the field. But packagers must never lose sight of the fact that they are, in the end, responsible and that violation of the law may bar their goods from shipment in interstate commerce.

Actions by associations

Concern over clearance problems was the prime force behind the recent series of four meetings of top officials of practically every important packaging-supplier association, representing virtually every type of food-packaging material and container. These sessions—believed to be unique in their scope—were instigated by the National Fibre Can & Tube Assn. to find out: (1) what individual associations and suppliers are doing to assemble clearance data, (2) how results of these separate programs can be shared by all associations to avoid duplicate efforts and (3) how F&DA and other Federal agencies can be informed of the economic and legal effects of the additives law.

Sharp disagreement on the extent of the potential perils and how to meet them—reflecting similar divergent views among individual packagers and suppliers—has so far prevented any action on the proposal to encourage understanding of Government officials. But the meetings have resulted in producing these significant results:

1. An exchange of information among all participants on the activities of other associations in helping members satisfy the requirements of the new Food Additives Law.

2. An informal agreement among the associations to circulate information on all pertinent research

Highlights of progress under the Food Additives Amendment

1. **Representatives of 41 supplier associations organize to solve mutual problems of the packaging industry.**
2. **"Approval by specification" petition for polypropylene suggests a simplified test procedure for some materials**
3. **Packagers and suppliers develop methods for assembly and presentation of technical data to the Food & Drug Administration**
4. **F&DA compiles lists of chemicals for approval by "qualified experts"**
5. **Some confidential "prior sanctions" of material are publicized**
6. **F&DA appears to be liberalizing its interpretation and enforcement**

Associations represented at inter-industry meetings

Adhesives Mfrs. Assn. of America
Aluminum Assn.
Aluminum Foil Container Mfrs. Assn., Inc.
Aluminum Wares Assn.
Can Mfrs. Institute
Dry Color Mfrs. Assn.
Fibre Box Assn.
Fibre Drum Mfrs. Assn.
Folding Paper Box Assn. of America
Food Tray Assn.
Gelatin Mfrs. Institute of America, Inc.,
Glass Container Mfrs. Institute, Inc.
Glassine & Greaseproof Mfrs. Assn.
Gummed Industries Assn.
Kraft Paper Assn.
Label Mfrs. National Assn.
Laminated Foil Mfrs. Assn.
Laminated Paperboard Packaging Assn.
Lithographers National Assn.
National Assn. of Glue Mfrs., Inc.
National Assn. of Printing Ink Makers, Inc.
National Assn. of Sanitary Milk Bottle Closure Mfrs., Inc.
National Burlap Bag Dealers Assn., Inc.
National Fibre Can & Tube Assn.
National Flexible Packaging Assn.
National Paper Box Mfrs. Assn.
National Paperboard Assn.
Packaging Machinery Mfrs. Institute, Inc.
Paper Can Assn.
Paper Cup & Container Institute
Paper Pail Assn.
Paper Plate Assn.
Paper Shipping Sack Mfrs. Assn.
Paraffined Carton Assn.
Pressure Sensitive Tape Council
Printing Industry of America, Inc.
Pulp & Paper Prepackaging Assn.
Society of the Plastics Industry, Inc.
Specialty Paper & Board Affiliates
Textile Bag Mfrs. Assn.
Waterproof Paper Mfrs.

programs and all legal activities as these develop.

3. Contact by individual associations with F&DA and the Department of Commerce to acquaint these agencies with the severe strain that the law, as it is now interpreted, is putting on manufacturers with respect to research and development and—in some cases—even to survival.

How much effect joint activity by the 41 associations will have on F&DA interpretations is uncertain, but the gravity of the situation has been made plain to the Department of Commerce—which was represented at the third meeting—and a promise of help wherever possible has been obtained from this agency if the over-all effects warrant such action.

Some observers claim that the lack of petitions is a hindrance to effective assistance from other Government agencies. Without documentary evidence, it is difficult to prove that the packaging field is being hurt, according to this line of reasoning. Such evidence should be forthcoming shortly, however, judging by the activity among packagers and suppliers—particularly among the larger companies—during the past few months.

As MODERN PACKAGING went to press, the Packaging Institute announced the formation of a "Regulatory Problems Committee" under the chairmanship of Roger V. Wilson, director of customer research, Continental Can Co. Interested packagers should contact the Packaging Institute.

Polypropylene petition

One potential aid to packaging men seeking broad approval of their materials for food use may grow out of the petition submitted by Hercules covering a complete formulation of polypropylene resin. A major point is that this plastic formulation can be molded or extruded just as it is, with no further additives. Thus, clearance for the resin should qualify any container or film made from the resin.

The really important aspect of the petition, according to Hercules' officials, is a new philosophy of "approval by specification." Its advantage: elimination of the burdensome task of developing one or more chemical tests sensitive enough to pick up extremely small quantities of migrant compounds in a broad number of food products. These identification tests are called for in the Food Additives Amendment if a new chemical migrant is not generally recognized as safe and if tolerances for migration must be established by F&DA. Under these latter conditions, the test methods must be supplied by the petitioner to enable the agency to check samples of food picked up in interstate commerce to see if the packaging material is performing according to the description in the petition. Even F&DA chemical experts have admitted that such

tests may not be possible, particularly when dealing with plastics materials.

To skirt the test-in-foods issue, the polypropylene petition employs the following three steps of scientific procedure:

1. It spells out the complete chemical content of the polymer, including chemicals used in manufacture, plus the methods used to eliminate the latter and their residue, if any.

2. It provides extraction data showing the maximum transfer of migrant chemicals over the range of the narrow specification.

3. It presents toxicological evidence that these migrants are completely safe at concentrations of more than 100 times that which could possibly transfer to food.

Using these data, it is argued in the petition that tolerances are not needed on the migrants because they are not necessary for the protection of public health. Such dispensations of tolerances are left to the discretion of F&DA under the law. F&DA can simply check the packaging material rather than the food to determine whether the polypropylene meets the specifications set forth in the petition. If it does, then the migrants cannot be out of line.

Industry experts are extremely hopeful that this original approach will point a way out of the test-in-foods dilemma. And even F&DA officials seem to look to this petition with some relief.

Arthur A. Checchi, F&DA's assistant deputy commissioner, recently told the American Bar Assn. that "where meaningful specification for packaging materials can be drawn up and it can be established that the most of any substance that can reasonably be expected to migrate from them under the most exaggerated conditions of use can be shown through the petition to be safe, there would be no need for establishing tolerances for the migrant."

John L. Harvey, F&DA's deputy commissioner, told MODERN PACKAGING that each petition of this nature would be judged individually, but that if specification and toxicological evidence were all in order and if F&DA could test areas of sample packages untouched by the food for analytical content, then this method might be satisfactory.

Both Federal and industry specialists caution, however, that this technique necessitates the publishing of the specifications for the packaging material—a revelation of manufacturing data that many companies may not find acceptable. Also, the clearance by specification procedure can only be used for products that can be closely controlled in the manufacturing process and that do not contain migratory chemicals whose safety might be questionable. Moreover, technical experts claim that this technique limits any later modifications in the manufacture or content of the material unless the manufacturer is willing to go through a new round of clearances, although F&DA officials assert that such changes could be speedily accommodated under the law. This point may pose a serious drawback to developmental improvements of a new packaging material.

Final authority *for one-year extension of enforcement under the new Food Additives Amendment to the Food, Drug & Cosmetic Act rests with this cabinet member, Arthur S. Flemming, Secretary of Health, Education & Welfare. New law's initial deadline is March 5, 1960, but Flemming has said he will grant extensions up to 12 months only to packagers or suppliers who are working toward compliance.*

While the polypropylene petition may ease the expense of one type of chemical research, it still requires the petitioner to engage in exacting and expensive chemical-extraction tests and animal studies where prior published data on toxicological safety are not available.

Goodyear's three F&DA-approved films demonstrate two methods by which food-packaging materials have been cleared for use.

Pliofilm, according to company executives, has been approved under prior sanction—clearance prior to the new Food Additives Amendment. Since 1936, all forms of Pliofilm now available had been sanctioned by F&DA on the basis of early toxicity tests. This included the full term of feeding tests then stipulated by the Government. Goodyear believes these sanctions are still valid.

Another example of clearance by prior sanction covers Videne A (a form of polyester film), formulated with an undisclosed polymer included in F&DA's original list of acceptable chemical additives used in packaging materials[2]. This Goodyear

[2] See "F&DA Acceptance Criteria," MODERN PACKAGING, Jan., 1955, p. 115.

food film was cleared by F&DA in 1956 after extensive extraction tests, Goodyear officials explain.

The most recently approved Goodyear food-grade film, Vitafilm F (polyvinyl chloride), introduced early this year, is composed of materials the nontoxic nature of which had already been established and recognized by F&DA, the company says.

Several of Celanese Corp.'s acetate film and sheet formulations also stand approved, according to Celanese. Extraction tests and two-year animal-feeding tests were completed in 1955 and the company submitted data on an undisclosed plasticizer to provide the basis for F&DA approval the same year.

There are probably many more instances in which materials are in the clear because of prior sanction, but these are some of the examples that have come to attention. Reportedly, companies involved believe that if they hold prior sanctions, the new law permits them to continue offering approved materials unless or until they are notified to the contrary by the Food & Drug Administration.

New ideas on procedure

Though every researcher can cite irritating problems in his work on clearances, the activity to date has clarified many points on procedure and has made clear what appear to be some basic ground rules in running tests and in consulting F&DA. The important points are:

1. Packagers should assemble chemical and available toxicological data before approaching F&DA in order to avoid assignment by the agency of unnecessary test work.

2. Chemical data should be assembled in an orderly fashion—starting with the formulation of the material and working through all necessary extraction tests[3] of each chemical constituent of the material to be cleared.

3. By knowledgable interpretation of the chemical tests and use of published toxicological information, toxicological studies may in many cases be limited to one or possibly a few significant chemicals in the packaging material.

4. For all practical purposes, petitioners must shoot for complete clearance of packaging materials in broad usage rather than qualified approval with tolerances, since F&DA still insists that the petitioner supply test methods for measurement of the amount of migration into the food products if tolerances are necessary.

5. While F&DA has repeatedly stated that the food law makes no provision for the *de minimus* concept—meaning the toxicological insignificance of a chemical—many authoritative chemical technologists in the packaging industry insist that the agency will have to accept this rule in some degree, since minor amounts of migrant chemicals and contaminants cannot be prevented in either food or food-packaging materials.

6. Writing and formal submission of the petition —with its accompanying legal work—should wait until F&DA has inspected the combined chemical and toxicological data and has indicated its informal approval of the material.

Many knowledgable packagers insist that it is worse than useless to take general problems to F&DA before starting clearance work. They point out that without concrete knowledge of the problems before them, the agency will simply advise a program to cover any possible contingency; this may result in a petitioner doing much unnecessary work. F&DA men officially reject this possibility, but admit that their suggestions for drawing up a petition can be more meaningful if they have chemical and animal-feeding data before them.

By knowing how a packaging material is made and exactly what residual chemicals are in it, a petitioner can save much valuable time in extraction tests. As an example, it has been estimated that between 20 and 25 chemicals are used in the manufacture of an "average" plastic packaging material. Many of these are removed during manufacture, remaining only in insignificant trace amounts. Thus, it may be necessary to test only five to 15 chemicals for extractability. Here, too, many chemicals are eliminated, say the experts.

While almost anything will be extracted to some extent in these severe tests, some compounds will fall below the level of toxicological significance—unofficially put at 1/1000 ppm. of extracted chemical for compounds of unknown toxicity. Other constituents can be checked off on the basis of published toxicological data, which must be searched for in the literature since F&DA will not undertake to check these sources. Thus, in the case of this hypothetical plastic packaging material, there may remain only two to five chemicals that must undergo animal-feeding tests.

All packagers struggling with this procedure, however, stress the need for extremely competent chemists and toxicologists to evaluate the facts as they are developed and to judge what chemicals are significant in the tests and what are not. Misjudgment on these points, it is emphasized, could result in rejection of the petition by F&DA or—even in expensive re-testing.

Lists of 'safe' chemicals

Help on these chemical and toxicological problems, however, is coming unexpectedly from F&DA. The agency now realizes [*Continued on page 249*]

[3] See "Extractability Testing," MODERN PACKAGING, July, 1959, p. 113.

Capturing the qualities of mops

Transparent rigid polystyrene shows shape of O-Cedar dust-mop head; soft polyethylene bag demonstrates squeeze action of moistened sponge mop

Packaging ideas in use in other fields are now at work selling two types of O-Cedar mops. Both mops use plastic materials for visibility. In one case the plastic is rigid; in the other case it is soft, to emphasize the softness of a moist sponge mop.

For its fibre dust mops, this division of the American-Marietta Co., Chicago, has adopted circular or triangular rigid thermoformed polystyrene trays and heat-sealed lids of the type used to package frozen fish sticks and popcorn.* Aside from full visibility, the container permits the mop head to retain its proper shape no matter how it is displayed.

For its sponge mop, O-Cedar substitutes for cellophane a heat-sealed polyethylene bag that also makes the mop completely visible. But—most unusual—this mop head is actually water soaked before packaging and the polyethylene retains the moisture, thus keeping the sponge soft and attractive.

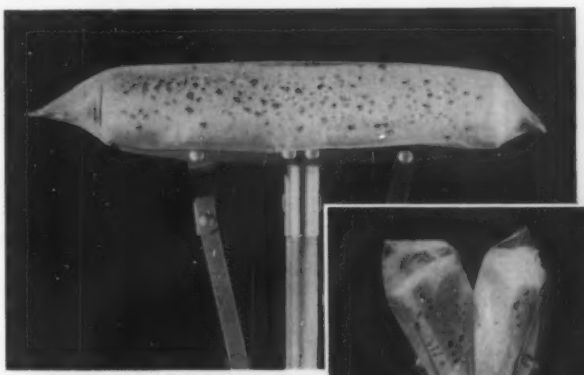
Fitted to a hand-operated mechanism at the end of the mop handle, the packaged head can be flexed and unflexed by a shopper or clerk to test the squeezing action of the device. Yet the product remains untouched and unsoiled. The mops are bagged by machine, but the head is attached manually.

For its dry mops, O-Cedar's switch from a tied polyethylene bag to the new rigid polystyrene container solved the problem of making the mop head look like a mop head instead of a limp ball of yarn. A small opening in the top of the package permits the handle to be snapped on and off.

The tray is 7.5-mil biaxially oriented polystyrene and the lid, 10 mil. They are mechanically locked and heat sealed on the same type of semi-automatic machine used for packaging popcorn. Current production of 200 units per hour is expected to be more than doubled when automatic equipment is installed. Although obviously more expensive than the former polyethylene bag, the new container reportedly saves 25% in packaging labor.

SUPPLIES AND SERVICES: Trays and lids for dust mops designed by Palma-Knapp Associates, River Forest, Ill., and thermoformed by Poster Packaging, 3401 W. Division St., Chicago 51, using Plax "Polyflex" oriented polystyrene. Semi-automatic heat sealer by Anderson Tool, Ludlow, Mass. Polyethylene film and bagging equipment for wet mop by Mehl Mfg., Cincinnati 2.

* See "Popcorn in Polystyrene," MODERN PACKAGING, July, 1959, p. 104.



Moistened wet mop *is bagged in polyethylene to keep it wet and to permit shopper to test action of squeezing device without removing product from bag.*

Rigid polystyrene *tray with heat-sealed lid is designed to retain the shape of O-Cedar's fibre dust-mop head no matter how it is displayed on retail rack. A hang tag carries sell copy.*

OFF-THE

Angled, one-piece label *not only gives unusual decorative effect, but takes the place of two spot labels formerly used. Descriptive data are on back half of label. Distinctive cap design permits an unbroken line between bottle and closure.*

With an ordinary paint brush and a "floor" brush attached to a standard spot-labeling machine, Pacquin, Inc., has discovered an efficient mechanical way to apply a die-cut paper label diagonally around a vase-shaped lotion bottle. The accomplishment suggests new possibilities in handling angled labels to obtain unusual design effects.

The problem came up when this company commissioned a leading independent design firm to create a smart new glass package that could be produced in three sizes for Pacquin's Silk 'n Satin lotion. The solution illustrates how mechanical problems can be surmounted if engineering departments of a company are given the go-ahead to carry out a package designer's ideas.

Pacquin wanted a package with greater cosmetic appeal and a more pleasing top-of-the-dressing-table look. The design selected comprises a tall vase-shaped bottle with a long graceful neck, a specially designed polystyrene cap to form an unbroken line between bottle and closure, and a distinctive diagonally die-cut label that wraps around the bottle at an angle from front to back to tie in with an "off-the-shoulder" advertising approach.

The new design immediately called for important modifications of the existing packaging line. The supplier of the labeling machinery was called in. Engineers were assigned to the problem. After engineering the development, they asked to have the equipment moved to the supplier's assembly floor for thorough testing. This was done and after a few weeks, the labeling machines were returned to Pacquin with changes completed, ready for operation.

The machinery supplier describes as follows the engineering revisions necessary to apply the relatively long, rectangular-shaped labels to the tapered container in a spiral position. Bottles are caused to run through the machine slightly off-center of stations to compensate for the label wrapping around one side only of the container. After the labels are coated with adhesive from glue-applicator rolls, the bottles receive the label by contact in the normal manner. At this point a jet of air is used to start the extended portion of the label around the container side. At the next station a wiping pad serves to continue label contact with the bottle to a point slightly more than half way. At this time in the sequence a single brush (the paint brush), mounted on a rotary shaft, moves into position to wipe the remainder of the label completely to the bottle surface. Following these operations, all bottles travel across a specially designed fixed brush that looks something like a big floor brush, which again wipes the label end to assure complete adherence.

Reportedly, the revamped machine is running efficiently at 120 per minute, according to Pacquin. And the company is especially pleased with this mechanical innovation to produce a package with the desired added consumer appeal. There is some saving involved, apparently, in that one label now takes the place of two—the front and back spots—formerly used. Lacquered labels provide moisture protection against wet hands.

Change-over to the new design also meant redesigning the cappers to accommodate the new-shaped closures. In addition to gracefully sloped sides, the

Difficulty of applying an angled, half-around label at high speed doesn't bar Pacquin from an original design; machine engineers solve problem with a paint brush and a 'floor' brush

-SHOULDER LABEL

closures have a "dished" top. The designers adopted this construction for two purposes:

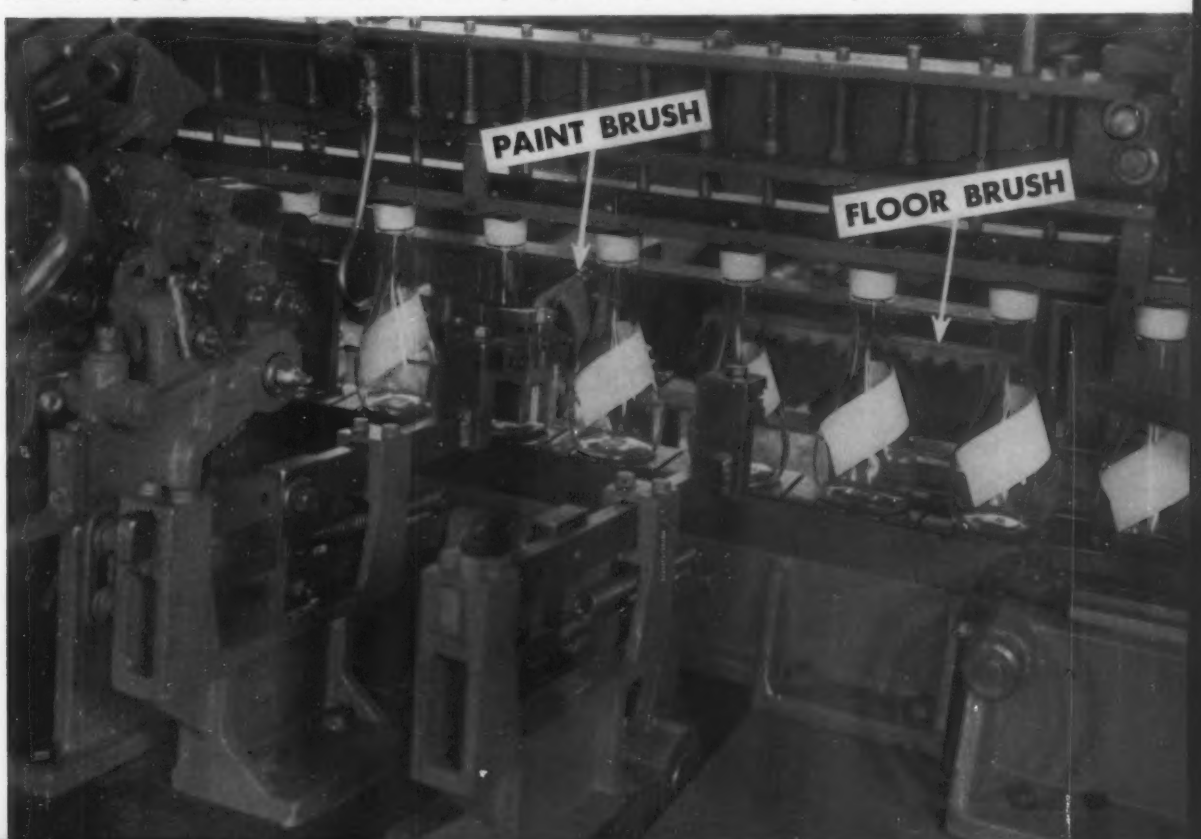
(1) To save enough plastic material to keep the cost of the new custom-mold cap in line pricewise with the former stock-mold caps,

(2) To provide a well to hold a pump-type dispenser which is attached through a drilled hole in the cap of the large-size container.

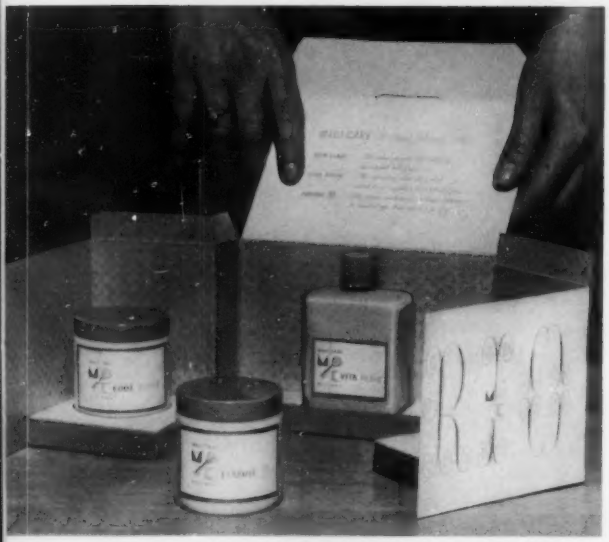
There was also the problem of fill level. If the new bottles were not filled to a level above the bottom line of the cap, an unsightly empty head space detracted from the aesthetic appearance of the completed package. Pacquin's production engineers overcame this difficulty after a period of trial and error by varying the temperatures during filling and the speeds of the filling machines.

SUPPLIES AND SERVICES: Design by Lippincott & Margulies, 430 Park Ave., New York 22. Filling, capping and labeling equipment by Pneumatic Scale, Quincy 71, Mass. Closures by Armstrong Cork, Lancaster, Pa. Bottles by Continental Can's Hazel-Atlas Glass Div., Wheeling, W. Va. Labels printed by J. C. Dillon Co., 227 E. 45 St., New York. Dispenser by Evans-Crowder Co., South Lyon, Mich.

Brush attachments *added to labeling machine may be seen below arrows in photo, taken during trial runs with blank labels. Approaching from left, bottles are run through machine slightly off-center of stations. After passing glue applicator, bottles receive labels by contact in normal manner. An air jet starts label around the side and a wiping pad continues the contact more than half way until brush mounted on rotary shaft wipes remainder completely around the bottle. Second brush in fixed position wipes label end to assure full adherence.*



Stage-carton presentation aids door-to-door sales



Packagers of products that are sold directly to women in their homes know that a successful presentation is largely dependent on dramatic packaging that captures and holds the attention. A way to achieve this goal at reasonable cost is suggested by the "stage-box" presentation carton for three new direct-to-consumer cosmetic products offered by Mytinger & Casselberry, Long Beach, Calif.

The folding carton swings open from the front, after the top has been lifted up, to reveal three glass-packaged Magi-Care cosmetics. The individual containers are seated securely in platforms in the base of the carton. As a visual aid to the demonstrator and the prospect, promotional copy about each item is printed on the inner surface of the carton's fold-back tuck closure.

For family identity, the label on each of the three new cosmetic containers features the company's trademark. The only other label element is the product name. This restrained design treatment is calculated to convey an image of high quality, the company points out. *Design by Walter Landor Associates, Pier 5 N., San Francisco 11. Presentation carton by Wolverine Carton Co., Grand Rapids, Mich.*

IDEAS

Protected by opacity

Sacrificing package transparency for light protection and enhanced brand identity, the Golden Triangle Packing Co. of Pittsburgh now is using fully printed white opaque polyethylene bags for 5- and 10-lb. quantities of California potatoes. Although the company has been packaging potatoes in polyethylene bags for six years, the emphasis formerly was on maximum product visibility.

Golden Triangle reports that its decision to switch from transparency to opacity in potato packaging stemmed from the fact that new potatoes tend to become slightly green in color after prolonged exposure to light. The results of this actually harmless discoloration, says the packager, were loss of eye appeal and consequent price markdown by retailers anxious to hustle the greening potatoes off their shelves. The new opaque film bag is said to protect the potatoes from the discoloring effects of light and to keep them fresh looking until they are used.

Bag design consists of a random pattern of colored triangles, printed with product and promotional copy. Closure of bags is done by a twist-tying machine. *Bag by Dow's Dobeckmun Co. Div., 3301 Monroe Ave., Cleveland 13.*

10-bulb blister pack

Multiple-unit blister packages for each of 32 different types of miniature light bulbs are now being distributed to dealers around the country by the Lamp Div. of Westinghouse Electric Corp. The new packages were designed not only for greater eye appeal, but also to permit quick inventory and stock checking, as well as to guard against pilferage.

An example of the division's new packaging is a hang-up unit for automotive bulbs. It consists of a pressure-formed acetate blister, with slide-track edges, which slips over a printed, die-cut hang card. Contoured cavities in the transparent plastic hold 10 bulbs. To remove bulbs for one-at-a-time or multi-unit sale, the dealer slides the blister up over the top of the card. A die-cut tab near the bottom of the card serves a dual purpose. In folded-out position in the completed pack, it prevents the blister from sliding off the card. This tab also is printed with type and voltage data so that each style is immediately identifiable when the cards are stacked on retail shelves, without having to lift each card off the pile individually. *Acetate blister by Plaxall, 5-26 46 Ave., Long Island City 1. Printed hang card by Holyoke Die Cut Card, Holyoke, Mass.*

IN ACTION

Polyethylene tube plug replaces bottom seal

To a Midwestern manufacturer of veterinary pharmaceuticals, a polyethylene plug that snaps snugly into the bottom of a polyethylene squeeze tube is the key to user convenience and a big saving in packaging costs. The experience of this packager—Norden Laboratories, Quincy, Ill.—can be applied by other producers of powdered products in tubes.

Use of the plug base enables the company to package Sulfacaine powder in its own plant on conventional powder-filling equipment. Norden formerly marketed the product in sealed tubes, but the packaging was farmed out. Because of the limited production of this veterinary powder, the packager points out, it would have been costly and impractical to invest in its own tube-sealing machinery. Since going to in-plant packaging and eliminating tube sealing, over-all packaging costs have been slashed by 20%, Norden reports.

As a bonus of convenience, the flat-based plug makes it possible to stand the dispenser tube on end, thus keeping the nozzle upright when the tube is not in use. *Polyethylene tube and screw cap by American Can's Bradley-Sun Div., Hillside, N. J. Tube cartons and display cartons by Central Fibre Products, Quincy, Ill.*

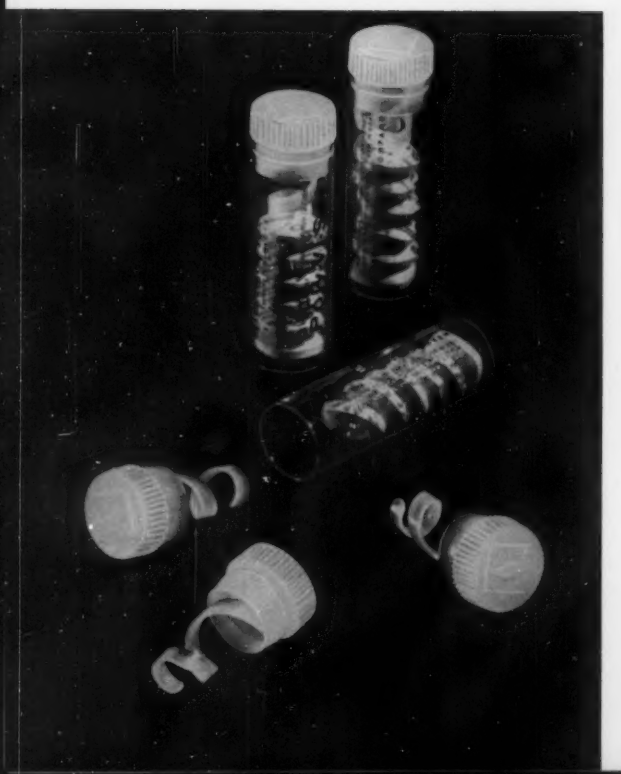
Big step in shoe packaging

A step away from the conventional in the packaging of men's shoes has been taken by Commonwealth Shoe & Leather Co., Whitman, Mass. The company has just adopted an attractive, twin-compartmented, hinged carton to promote its Bostonian and Mansfield lines of footwear as year-round or special-occasion gift items.

Each compartment of the self-locking carton holds one shoe. Spacious, die-cut openings afford product visibility when the hinged carton is open for display. After a sale is made, the carton is folded closed at the hinge line, hiding the shoes from view. A lock-and-tab device on the side of the sturdy package keeps it closed.

Two additional elements contribute to the carton's gift appeal. A paper sleeve that slips over the closed carton contains an appropriate message for holidays or other gift occasions. There is space on the front of the sleeve for a personal message. The retailer's imprint is confined to the back of the sleeve. The carton itself carries no brand or promotional copy. It is lithographed in a diamond pattern, incorporating the packager's traditional red, gold and black colors. *Carton by Gardner-Brooks, Springfield 9, Mass.*

IDEAS



One-piece spring closure

A functional plastic "spring closure" that eliminates the need for cotton wadding in the packaging of tablets in vials has been adopted by Mead Johnson & Co., Evansville, Ind. Feature of the one-piece, molded-polyethylene closure is a flexible spiral "tail" that prevents tablets from rattling around inside the container even after one or more have been removed. The spiral section expands naturally as tablets are removed, pressing gently but firmly on the remaining portion to minimize the danger of in-package breakage of the fragile items.

Mead Johnson currently is using the intriguing white plastic closure on transparent vials containing sample quantities of Poly-Vi-Sol tablets.

In addition to product protection, the new polyethylene closure is reported to afford greater convenience and neatness for the user. It does away with the often annoying little problem of prying cotton out of a narrow-mouthed container with the fingers. And it is not necessary for the user ever to handle or touch the spring section of the molded closure. *Molded closure by Dougherty Bros., Buena, N. J., using Du Pont's polyethylene.*

Bacon in a strippable, seven-layer 'booklet'

There is a definite trend among American bacon packagers toward upgraded packaging which accentuates convenience and long-term product protection after first use. An interesting illustration of this trend is the "Flavor Saver Pak" now being test marketed by Armour & Co., Chicago. The new package, which opens up like a booklet, is divided into four individually heat-sealed sections. Perforations along the midpoint of the vertical heat seal between each section permit one or more sections to be torn off as needed, leaving the remaining portion fully sealed and protected.

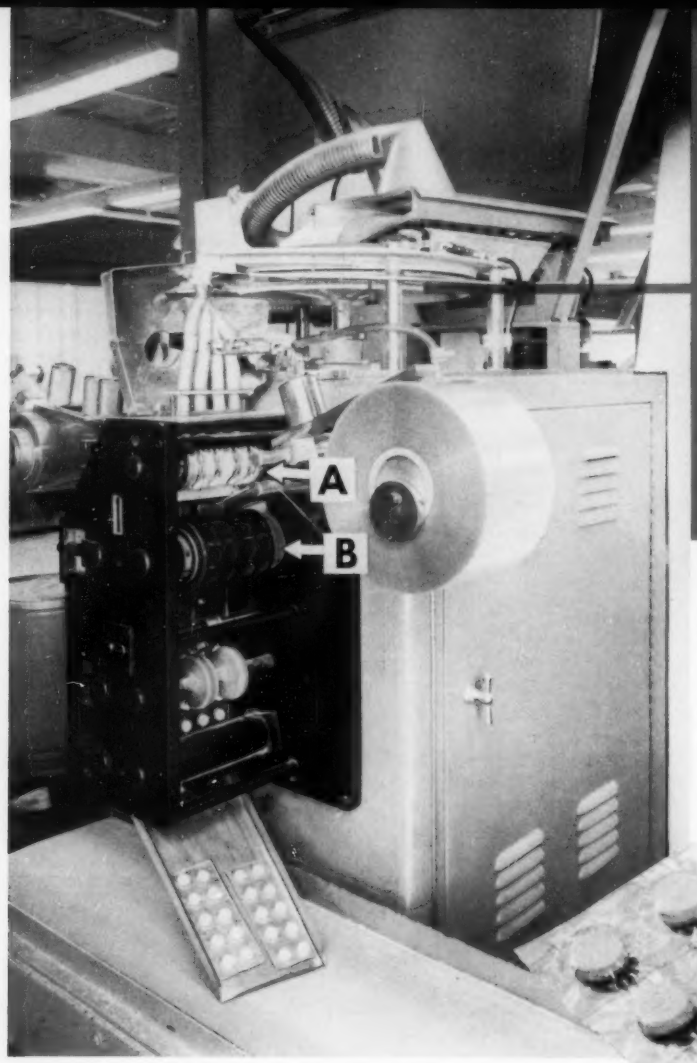
The bacon is machine packaged between two laminations of packaging material that in total consist of seven layers. The outer surface is printed aluminum foil, kraft paper, foil again and polyethylene. The transparent inner surface is a combination of cellophane, saran and polyethylene. According to Armour, the rigid package is completely airtight. *Printed foil lamination by Reynolds Metals Co., Richmond 18, Va. Film by Dow's Dobeckmun Co. Div., 3301 Monroe Ave., Cleveland 13. "Roto-Wrap" machine distributed by Conapac Corp., 120 E. 13 St., New York 3. Design, Associated Designers, 664 N. Michigan Ave., Chicago 11.*

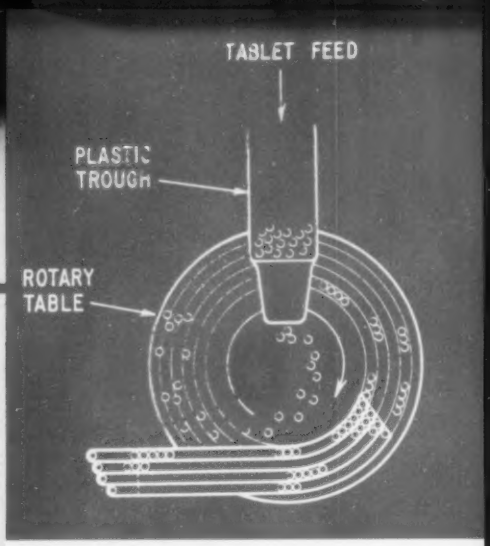
IN ACTION

Polystyrene-foam mailers without outer covering

Lightweight, molded polystyrene-foam containers carry Abbott Laboratories' glass-packaged liquid pharmaceutical samples safely through the mails without benefit of carton or interior cushioning. Each cylindrical, two-piece telescoping unit holds one bottle and a promotional folder snugly inside its 3/8-in. walls. Upper and lower halves of the mailing package are kept securely together, even under rough handling, by a wrap-around pressure-sensitive paper label. The label has a blank space for address and postage.

This new plastic mailer has potentials in other product fields where protection of the primary container during shipment is a critical factor. Although no significant packaging-material economies have been achieved in comparison with the cushioned carton formerly used, Abbott feels that its new container has definite advantages. Among them are speed of packaging, light mailing weight and the superior protection against glass breakage which is afforded by the shock-absorbent polystyrene foam. *Mailing containers by Polyfoam Packers, Div. Glo-Brite Products, 6415 N. California Ave., Chicago, using Dow's "Styrofoam." Labels by A. M. Steigerwald, 910 W. Van Buren St., Chicago 7.*





New strip packager *(left) uses vibrating trough to move tablets from feed hopper (top) to spinning sorting plate with four guide bars (sketch above). Four vertical coiled springs (far left) keep tablets in horizontal position for feed roll (A). Rotated 90 deg., tablets drop on edge to nip rolls (B) that heat seal tablets between two webs of polymer-coated cellophane. Despite high filling speed, the positioning of tablets and heat sealing is extremely accurate (below).*

Step-up in strip packaging

Increase of 200% in the output of hard-to-handle ethical drug tablets is achieved by Warner-Chilcott with a new rotary-action machine that adapts mechanical elements from packaging techniques in other fields

A major advance in the strip packaging of tablets has been accomplished at Warner-Chilcott laboratories, Morris Plains, N. J., by the adoption of a new rotary machine containing mechanical elements competely new to this packaging application, but instantly recognizable to users of cap-unscrambling machinery and pouch packers for luncheon meats.

This ingenious combination of mechanical action —modified to assure gentle handling of fragile "Gelusil" antacid tablets—has boosted packaging speed for this ethical drug product to 1,200 tablets per minute, a 200% increase over the former output of 400 a minute. Tablets are packed 10 to each strip of two-ply, heat-sealed, polymer-coated cellophane.

The five machines on the line, with a sixth to be added soon, are necessary to handle a yearly output of nearly a billion tablets, according to officials of this division of the Warner-Lambert Pharmaceutical Co. And the new machine is reported to be so efficient that product positioning and heat sealing are highly accurate, breakage is reduced and equipment occupies no more floor space than the previous, slower machines. To achieve this success required two basic changes in packaging technique:

1. Mechanical action was changed from reciprocating to rotary motion and the distance of product travel between sorting and strip packaging was shortened and brought under close control.

2. The type of cellophane used for strip packaging was changed from MSAT to polymer coated and upped from 300- to 450-gauge film to gain greater machinability and faster heat sealing. This switch also increased the barrier properties of the package and shelf life of the product.

The increased strip-packaging speed, plus use of a hard-to-handle carton that contains a perforated tear-off fifth panel carrying product and company identification, necessitated a coordinated group of automatic cartoning, wrapping and bundling machinery to complete the line. The removable panel permits dispensing the tablets in unmarked cartons.

In the new machine, the first key action is sorting the tablets, which are hopper fed across a vibrating feeder trough. Perforated to eliminate small particles of broken tablets, the trough discharges the product on a horizontal, spinning plate. Tablet depth on this plate is controlled by a pivoted feeler arm, which actuates a switch that stops and starts the vibrating trough according to product flow.

As the flat tablets spin around the plate, they are guided into four channels by fixed and spring-loaded guide bars in a manner very similar to the action of the tilted rotating plates in many cap-unscrambling machines. From the channels, the tablets drop into four short, round chutes formed by coiled springs. A vibrator that shakes the spring chutes maintains the horizontal position of the tablets during this vertical fall. The spring chutes remain full at all times so that the tablets have only a short drop into the steel feeder drum.

Next, a steel-die drum containing four rows of round ports rotates the tablets 90 deg. and drops them vertically on edge into another set of four short and narrow chutes. These vertical channels deposit the tablets between two webs of polymer-coated cellophane as the film passes over two opposed dies—heat-sealing steel and rubber nip rolls—that position the tablets four up and firmly heat

Package flow *runs from two banks of strip-packaging machines (rear) to battery of inspectors in foreground who check packages and stack the 10-tablet strips in groups of either five or 10. Placed in central bucket conveyor, strips pass to cartoner (right).*

Cartoning moves from right to left

Bundler *accumulates and overwraps six cartons in cellophane.*

Special overwrapper *folds and seals the cellophane wrap on trailing edge of the carton rather than bottom.*

Special handling *for five-panel cartons starts at right, where cartons are formed, filled and closed in an upside-down position.*

seal them in a single motion. The only timing device needed in this machine is provided by split collars on the feed roll.

A rotary slitting knife next divides the web lengthwise into two equal parts, each containing two rows of tablets. A set of rubber nip rolls located below the slitter keeps tension on the two webs of strip-packed tablets and acts as a positive feed for a rotary cut-off knife which clips each web into lengths containing 10 tablets (two rows of five tablets each). This entire vertical sealing and cut-off mechanism closely resembles many of the horizontal film-pouch packaging machines that are used for luncheon meats and other similar products.

Five-panel carton *(fifth panel shown upright) demonstrates why a special overwrapper is necessary. The containers are set up and filled in an upside-down position, with removable printed panel down. Thus, the longitudinal heat seal on package must be placed on the trailing edge of the package—rather than at the bottom—to avoid covering the printing.*

Vacuum hoses—located at the feed hopper, vibrating trough, rotary disk and spring chutes—eliminate powder from the tablets. A separate bearing plate enables the web slitter to be removed easily for sharpening.

The strip-packaging machines are arranged in two banks, one containing three units and the other, two machines at present. Two operators attend these five machines. Finished strips are conveyed and merged at an inspection and counting table, where 10 operators stack the strips in groups of either five or 10 and place them in a pocketed central conveyor. This flighted carrier moves the strips into an automatic cartoner where the special five-panel, 50- or 100-tablet cartons are set up upside down for loading. This technique prevents the underslung fifth panel from tangling in the conveying and loading mechanism, which has been modified to handle the cartons and the stacks of strip-packed tablets.

A special electronic weigher—sensitive enough to detect a single tablet missing in a box of 100—checks the cartons as they leave the machine, rejecting any off-weights. Because the cartons are upside down, with the printed identification on the under, fifth panel, the machine used to wrap the cartons in MSAT cellophane seals the material on the trailing side of the carton, rather than on the printed bottom side. Cartons are finally automatically assembled and bundled with cellophane in groups of six by a standard machine.

SUPPLIES AND SERVICES: Strip-packaging machine by Roto Wrap Machine Corp., Englewood, N. J. Cartoner by F. B. Redington Co., Bellwood, Ill. Overwrapper and bundler by Scandia Packaging Machinery Co., North Arlington, N. J. Automatic checkweigher by Hi-Speed Checkweigher Co., Ithaca, N. Y. Polymer-coated cellophane by Du Pont, Wilmington, Del. Cartons by Robertson Paper Box Co., Montville, Conn.

Sealer for random-size cases

GE's equipment automatically adjusts itself to a varied flow of cartons, then glues and seals tops and bottoms with major savings in labor, material and space

A new glue sealer which adjusts itself automatically to handle a wide range of different-sized shipping containers fed in continuous random order has lowered packaging costs substantially for General Electric Co.'s Trumbull lamp plant in Warren, Ohio. This equipment should be of great interest to manufacturers who are packaging many diverse products in rather small lots. Installation of the new sealer provides the following advantages for GE:

1. A reduction of 60% in direct packaging-labor costs compared with the former hand taping.
2. A 75% saving in floor space.
3. A good-sized cut in sealing-material costs through elimination of gummed tape formerly used.
4. Neat shipping containers which provide maximum printing surface and which deter pilferage because they must be cut or torn to open.

GE's case sealer can handle shippers ranging from 8 to 24 in. in length, 8 to 22 in. in width and 6 to 18 in. in height, all without manual adjustment or multiple sealing units. Speed averages 12 cases per minute. The unit's flexibility allows the Trumbull plant to feed two packaging lines into one main conveyor and one case sealer regardless of the size or sequence of containers used. No precise scheduling is necessary.

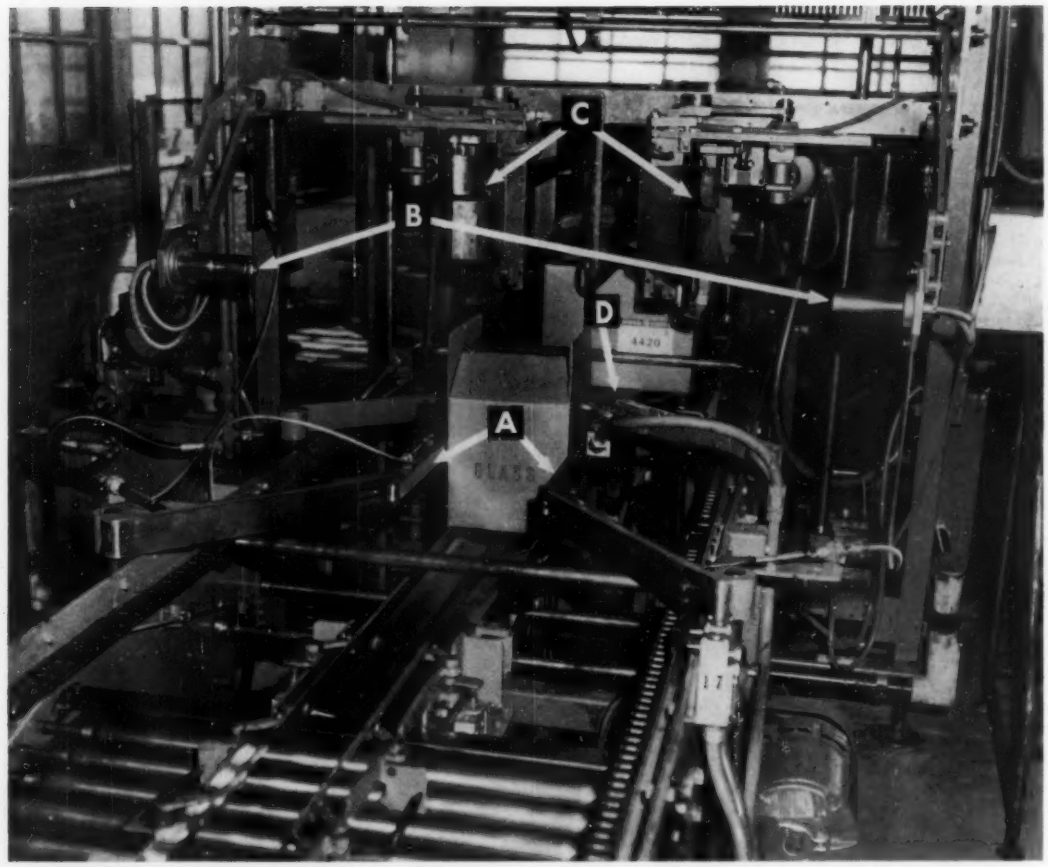
Located along the two packaging lines are loading stations for GE's retail pack, in which lamps are placed in individual cartons and then packed into shipping containers, and its bulk pack, in which lamps are placed in open trays and the trays then placed in shipping containers.

GE also has an open tray pack for internal use which is not packed in shippers and therefore requires no sealing. But these too are run through the sealer at random. For these tray packs, the sealer acts only as a conveyor to the accumulating area. This arrangement saves expense and floor space of an extra conveyor by-passing the sealer.

Before the installation of the new case sealer, taping positions were set up along the main conveyor. Operators with dial tapers closed all containers manually. Dozens of different case sizes are used, because bulbs are produced in numerous sizes and shapes and from eight to 60 units are packed in a single shipper. Each operator had to select the proper lengths of gummed tape for each case and apply them in six different places on each one. Also the cases had to be turned over for final sealing. This process was tedious and slow.

The flexibility and speed of the case sealer are, of course, its strongest points. But GE has also

In random order, *vari-sized cases of General Electric lamps enter L-shaped sealer from main conveyor. The machine automatically adjusts itself to width and height of each succeeding case to be sealed. In foreground is a tray pack that is also conveyed through the machine even though it does not require sealing.*



Size adjustment *is shown here partially completed. Case width is measured by parallel arms (A) and case height by photoelectric cells (B). The measurement of case width automatically adjusts horizonal spacing of both lower and upper glue rolls (C). Action of the photoelectric cells automatically raises or lowers the upper glue rolls to case height. In this photograph, the glue rolls are still set to the size of the preceding large case. This carton is being conveyed by the cross bar along a package-supporting plate (D) until upper and lower plow-shear folders close all flaps in unison.*

found its physical shape an advantage. Case discharge by the sealer's rotating compression unit at nearly right angles to the gluing section allows the Trumbull plant to utilize corner floor space more fully. The case sealer fits neatly into the corner and itself turns the shipping containers sharply to the right. Sealed cases (and the open tray packs) are discharged from one station onto a take-away conveyor which carries them to an accumulating area to be sorted and palletized.

GE finds this arrangement most efficient for its particular needs. However, the case sealer is capable of discharging at eight different stations and can automatically group the cases by height for discharge at a specific station when this set-up is most advantageous on the production line.

To understand how the sealer works, picture a tunnel-like apparatus through which each case passes while successive interconnected devices automatically perform various measuring, adjusting and gluing operations on the bottom, sides and top of each unit, no matter what its size or shape.

Sealing operation

After a vertical case stop indexes each shipper into the primary flight conveyor or centering section, cases proceed with bottom flaps folded and main top flaps erect through the following sequence:

1. A facing pair of parallel measuring arms adjusts horizontally to the width of the case. This activates two other steps:

2. Two sets of glue rolls, both upper and lower, are automatically spaced apart horizontally by action of the case-width measuring arms.

3. Two photoelectric cells move vertically to adjust the upper glue rolls to carton height. The photoelectric cells ascend or descend until the stream of light is cut off by the top of the erect main flaps of the case as it passes by.

4. After the gluing devices have been raised or lowered by the photoelectric cells a cross bar moves the case through the gluing units.

5. All of the carton flaps are glued at the same time and they are closed in unison by upper and lower plow-shear folders just before they are loaded into a compression head.

In all size adjustments—width and height—there is no return to zero before the next case can be accommodated. Adjustments for larger or smaller case dimensions start from the point where the preceding case left off. No adjustment takes place when subsequent containers are of identical size or during an empty cycle. These are important factors as far as satisfactory speed of the sealer is concerned, as well as its flexibility.

GE's case sealer has four vertical glue rolls (two top, two bottom), each supplied with adhesive from a side-mounted tank. Excess glue is captured in a small accumulator at the bottom and pumped back to the tank. Variable-speed drives are used on each glue roll to give the best roll-case speed ratio. Glue skip is controlled by a solenoid-operated roller which removes the flap from the glue roll and re-engages it at the appropriate time. The amount of adhesive applied can be regulated to the exact coating thickness found to give best results.

GE has learned that its new case sealer holds enough adhesive for a full 8-hr. shift without refilling. However, filling of all four glue tanks on the machine requires only 10 minutes. The units are easily cleaned with water and clean-up is required no oftener than once a day.

In GE's installation, where open trays are sent through the sealer along with cases to be sealed, a special switching attachment has been added. The sealer will adjust to the tray's width so as to admit it into the machine, but the attachment forestalls the photoelectric cell's height-sensing mechanism from operating. Height adjustment remains at the position left by the last case until the next case to be sealed arrives. The open trays also pass through the compression unit, but no pressure is applied.

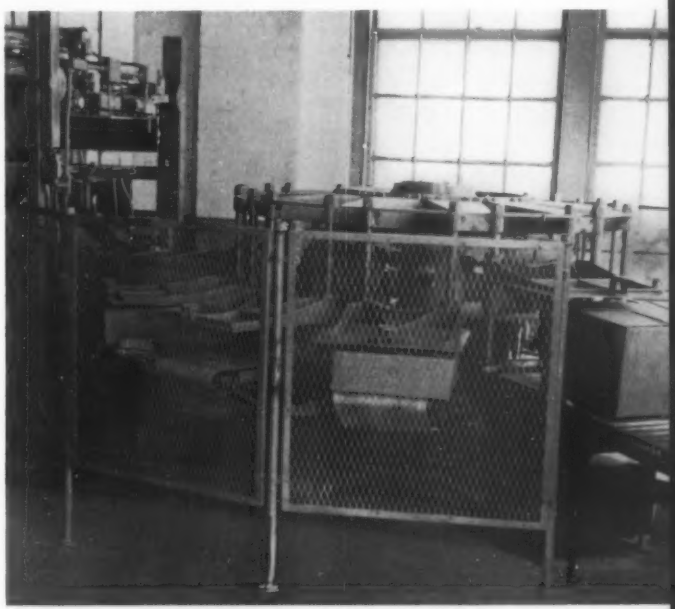
Compression

When cases to be sealed reach the compression unit, the compression cycle has already been automatically initiated by passage of the case through the gluing section. This compression unit is an 11-head rotary machine instead of the usual straight-through operation. Two heads are indexed at one time. The lower platen of each indexing station is a belted conveyor; the upper platen, a pressure plate. As soon as a case is received, the upper platen —driven by a hydraulic piston—is lowered onto the upper case flaps and the case is indexed. At GE, each case is retained in the compression unit for 1½ revolutions of the rotary unit to allow glue to set firmly. The upper platen is then raised. A continuously driven set of friction wheels is forced against the lower conveyor platen by the hydraulic piston and the finished case is then finally discharged onto the take-away conveyor.

The total length of the glue and compression sections is slightly more than 22 ft., which is thought to be less than the length of any comparable type of case-sealing equipment.

The sealer's speed is adjustable and GE believes it is capable of operating at a rate more than the present average of 12 cases a minute. Its flexibility, coupled with very little maintenance, is expected to provide adequate sealing capacity even for future stepped-up production demands.

SUPPLIES AND SERVICES: "Omnimatic-Rotopress" hydraulically operated case sealer by J. L. Ferguson Co., Joliet, Ill. No. 176 RN adhesive by H. B. Fuller Co., 225 Eagle St., St. Paul 2, Minn.



Rotary compression unit *turns cases 90 deg. from sealer (left) to take-off conveyor (right). Note upper platen raised slightly so completed case can be expelled. Compression cycle is automatically initiated by passage of case through gluing section. All cases make 1½ trips around compression unit to allow the glue to set.*

PACKAGING PAGEANT

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1 Single-wall, heavy-gauge cellophane has replaced the former multi-layer bag construction for Brown's Confectionery's Hygrade line of nut meats. Stiffness of the 600-gauge, polymer-coated film reportedly prevents nuts from settling to bottom of bag after dump filling. Saddle label allows full view of the product and capitalizes on the transparency of the film. 600-K cellophane, Du Pont, Wilmington, Del.

2 A new 12-oz. "giant economy size" jar, considered ideal for family use, has been added to the Kroger Co.'s line of Instant Spotlight Coffee in all areas served by the chain. Label, closure and jar design is similar for all sizes to provide family relationship and fast recognition value. Glass, Anchor Hocking, Lancaster, Ohio. Closure, Phoenix Metal Cap, Chicago. Label, Ohio Press Printing, Cincinnati.

3 Aluminum foil combined with waxed tissue forms a protective flexible packaging material for Chiclecraft, Inc.'s new Park's Sugarless Chewing Gum. The wrap is heat sealed to hold five sticks of the dietetic gum in a neat pack. A printed cellophane overwrap covers each pack of five sticks. Foil, Aluminum Co. of America, Pittsburgh.

4 The multiple-unit concept has now been applied by Esso Standard Oil Co. to motor oils for marine use. This four-unit carrier pack for 1-qt. cans of outboard motor oil is being extensively tested in a number of large market areas and is being closely watched for possible extension to other of the company's products. Carrier supplied by Berles Carton Co., Paterson, N. J., and engineered by R. E. Van Rosen, New York.

5 A new application for the fibre drum is its use by the Anaconda Co. and its American Brass subsidiary as a shipping and storage container for four 25-lb. paper-wrapped coils of copper wire. One coil may be removed for use while the others remain safe from dirt and contamination within the sturdy drum. Positive closure and pilferproof seal are features of the drum. Slightly flared cover allows handling without pounding or tugging. Metal cover and base interlock snugly for stacking. Stapak drum, Continental Can's Fibre Drum & Corrugated Box Div., New York.

6 The ball-point principle has been successfully adapted for lipstick application by a major cosmetic house. Richard Hudnut's new "Lip Quick" is an elegantly designed, slim, gold-colored metal case. By removing the cap, the rounded ball-point applicator tip is ready to use, releasing flowing color directly to the lips, taking the place of lipstick, lip liner and lip brush. A major national advertising campaign is planned. Roll-on applicator, Omega Mfg. Co., Inglewood, Calif.

7 Glamorene's new "Squeeze-On" Miracle Oven Cleaner in a polyethylene squeeze tube with sponge-tip applicator simplifies oven cleaning. When tube is squeezed, product flows through sponge and is applied in one simple operation. A nationwide consumer promotion is scheduled in which the product is offered free to each new purchaser of a Magic Chef range. Later the promotion will be extended to include other major range manufacturers. Tie-ins with department stores and food chains for prize drawings of ranges are planned. Tube, American Can's Bradley Container Corp., Maynard, Mass.

8 A special high-gloss resin coating provides a lustrous surface on this five-color-printed, solid bleached sulphate board carton for Hough Foods' frozen canapes. Carton holds 12 frozen snack items in a cellophane-overwrapped aluminum foil pan. Carton, Continental Can's Boxboard & Folding Carton Div., New York.

9 Two punched-out holes, one above the other, on hang-up display cards for Pulvex Anti-Flea Collars solves the problem of rack hanging a carded horizontal carton. Alternate use of the holes pairs the packages one above the other so that they hang neatly without awkward waste of space. Package, Stone Container's W. C. Ritchie Div., Chicago.

10 A glassine-foil-polyethylene combination selected for a new pocket-size flexible pouch provides new convenience with a high degree of protection for Brown & Williamson's Sir Walter Raleigh pipe tobacco. The bright rotogravure colors printed in reverse on special "supertransparent" glassine show through with high clarity and sparkle and, being on

the inside, will not scuff. Pouch material, Continental Can's Flexible Packaging Div., New York.

11 A corrugated shipper that converts into either a counter display or a pegboard hanger for Marglo's Tempstix self-sticking household thermometers reportedly provides an efficient, low-cost display unit. The white-faced corrugated display is actually the second half of the shipper. A plain corrugated case fits over the unit and is sealed at the bottom. When slit, the cover is discarded. Container, Grand-City Container, North Bergen, N. J.

12 Containers and sleeves of extruded butyrate plastic provide protective, lightweight, transparent packages for delicate resistors marketed by the International Resistance Co. Resistors are enclosed in a printed paperboard folder. The folder is enclosed in a butyrate sleeve which is packed with several other sleeves into a rigid butyrate container. Sleeves and containers, Extruded Plastics, Norwalk, Conn., using Eastman Chemical's Tenite plastic.

13 Chicopee Mills reports that since the adoption of polyethylene film for packaging its Chix Baby Products' Div.'s crib and youth bed sheets rejects due to broken packages have dropped to only a fraction of what they previously were. Wrapping is done on high-speed automatic equipment. Bags, Stylecraft Packaging Service, Charlotte, N. C., using Visqueen film.

14 Adorable Bra's new package is designed specifically for self-service merchandising on pegboard racks in supermarkets and department-store basements. Printed in two colors by offset lithography with a see-through window, this new container is credited by the company for the recent substantial increase in sales. Package, Lassiter Corp., New York.

15 J. Colonna Bros.' Imported Parmesan Grated Cheese now in a tall tumbler attractively decorated in two colors may indicate a renewed interest in re-use glass containers. Cap is gold colored and label is three-color printed. Glass, Continental Can's Hazel Atlas Glass Div., New York. Cap, White Cap, Chicago. Label, Doalbert Printing, New York.

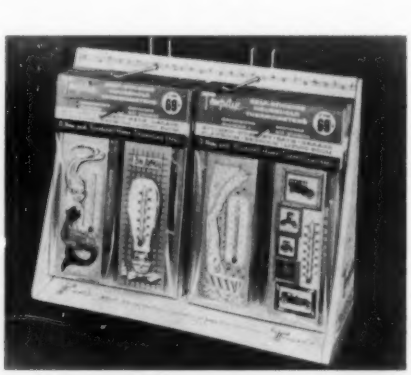
16 Frozen vegetables in transparent polyethylene bags have been introduced by East Coast Marketers. Bags, in 1- and 2-lb. size, are four-color printed. The vegetables (peas, corn, green beans, limas and mixed vegetables) are frozen before packaging, thus remain free flowing. The housewife can pour out a portion of the contents, twist close the bag and return the rest to the freezer. Printed polyethylene, Dow's Dobeckmun Div., Cleveland.

17 Washing-machine hose, formerly a difficult item to merchandise, gets prominent display with this colorful corrugated floor stand. It simplifies self selection by the shopper and stock control by the retailer. Four types of accessory hose products are displayed, each on a stand-up panel printed with catalog number. Additional stock is contained in the base of the unit. Display, West Virginia Pulp & Paper's Hinde & Dauch Div., Sandusky, Ohio.

18 Jell-O's "double-size" package marks the first new size of Jell-O package since the product was introduced in 1897, 62 years ago. The new 6-oz. family pack will be available along with the established 3-oz. size. Initially, the large pack is offered in only three of the 10 flavors in the Jell-O line.

19 Four-color-printed polyethylene draw-cord bags selected by Capezio Co. as the package for its line of ballet shoes have high-fashion appeal, yet perform several merchandising functions: transparency permits visible display; bags are easily opened and reclosed for customer try-on; draw cord provides a place to affix tag label; additional retailer packaging is eliminated. Bag is designed as a permanent storage bag for the shoes or for re-use as a beach bag. Bag, Bemis Bro. Bag Co., St. Louis.

20 The appetite-appeal, full-color overwrap on the package for Imported Rock Lobster Tails, newest addition to Fulham Bros.' line of seafoods, carries the long-established "4 Fishermen" trademark for family identity. Back of the wrap gives cooking directions, plus sketch showing how to cut the lobster-tail's undershell. Overwrap, Crown Zellerbach's Western-Waxide Div., San Leandro, Calif.



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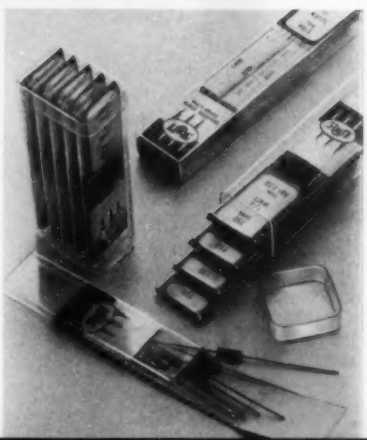

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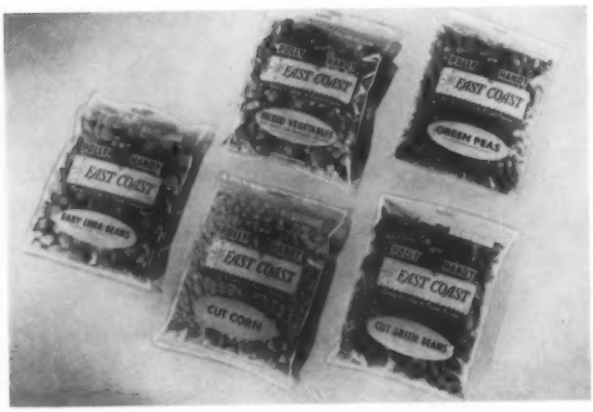

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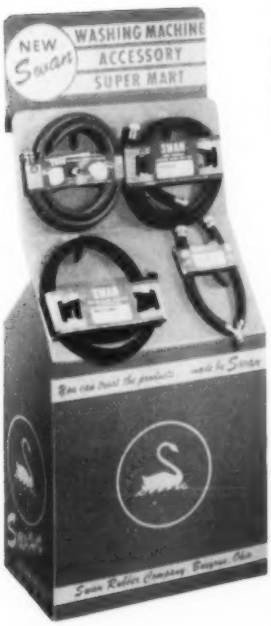
PACKAGING PAGEANT



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"Preserve packer's dream!"

... an over-all packaging situation so satisfactory, so settled, that the packer need hardly give it a thought.

Ask a preserve packer to list his serious problems, and it's most unlikely, nowadays, that he'll even mention *packaging.*

Recent developments have stabilized and standardized preserve packaging on such a generally satisfactorily plane that everybody—from packer to user—is well satisfied with things as they are.

Chief element in this happy situation is, of course, the coming of the Vapor-Vacuum ¼-turn "Twist-Off" Cap—and its almost universal adoption for preserve packaging.

• • •

Everybody likes the "Twist-Off". For protection, production efficiency, merchandising advantage, and convenience, it's so generally approved that its industry-wide adoption is easily understood.

But there's another factor even more important than these cap advantages which needs serious attention here. This is the fact that the "Twist-Off" is a product of White Cap—and, therefore, carries with it a long chain of plus factors. Seen in this light, the wide use of the "Twist-Off" actually grows out of the unique, long-standing relation between White Cap and the preserve packer.

Assurance—present and future

Preserve packers, like others who sell foods in glass, recognize that the White Cap research which produced the "Twist-Off" is very far-ranging and keeps on doing many jobs that packers want done.

Packers know that new key developments in preserve packaging will come from this same source whenever the need for them develops.

The packer knows, too, that White Cap is his constant ally on the production front. Here, solid help on engineering problems, on packaging line equipment, on preventive maintenance, and on plant economies is always at his elbow.

So, the preserver works with White Cap—and feels safe in the assurance that, whatever the future may bring, this alliance is one of his major assets.

"VAPOR-VACUUM"
Seal and Re-Seal

WHITE CAP COMPANY

SUBSIDIARY OF CONTINENTAL © CAN COMPANY

11-59

NEW "Twist-Off" CAP →
NEW Twist-Off CAP →
NEW "Twist-Off"
Twist-Off CAP →

Nature's packages *depicted on a photographic panel introduce the visitor to the exhibition. Lead-off, above descriptive wall label, is a huge photograph of an egg in its shell.*

Packaging comes to

No previous recognition of the increasing influence of packaging on the world of art has been more significant, perhaps, than the exhibition currently running in New York's Museum of Modern Art. In a show called "The Package," the world-famous museum, for the first time in its history, accords to packaging the same prominence among today's artifacts that it has given on other occasions to furniture, household equipment and automobiles. The exhibit, devoted exclusively to packaging, occupies the entire main floor display area and will continue until Nov. 9.

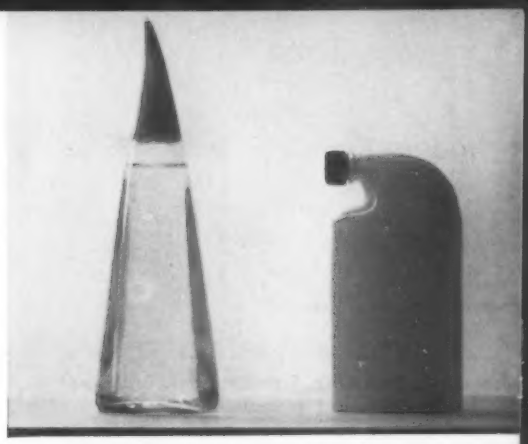
The 200 or more packages on display were collected from 10 countries in a project that had been in the making for three years. They range from miscible-film strips of tiny seeds to a 24-ft.-long black rubber collapsible tank to hold 20 tons of liquid, looking very much like a huge whale that flipped over from the Museum of Natural History.

The purpose of the exhibit, according to the introductory panel, "is to appraise packages of all sorts for their design qualities and in so doing to re-examine and perhaps broaden our ideas of what actually does constitute a package."

The exhibit was arranged by Arthur Drexler, director, and Mildred Constantine, associate curator, of the museum's Department of Architecture and Design. Selections were made "for excellence of structure and shape, color, texture, proportion and suitability of these qualities to functional performance." They have been almost entirely separated from their association with commercial production, merchandising, advertising or sales. Printed words and images have been included "only when

they make an important contribution to a total design." The starting point, apparently, was Webster's definition of a package as "a bundle made up for transportation; that in which anything is packed; a box, case, barrel, crate, a container."

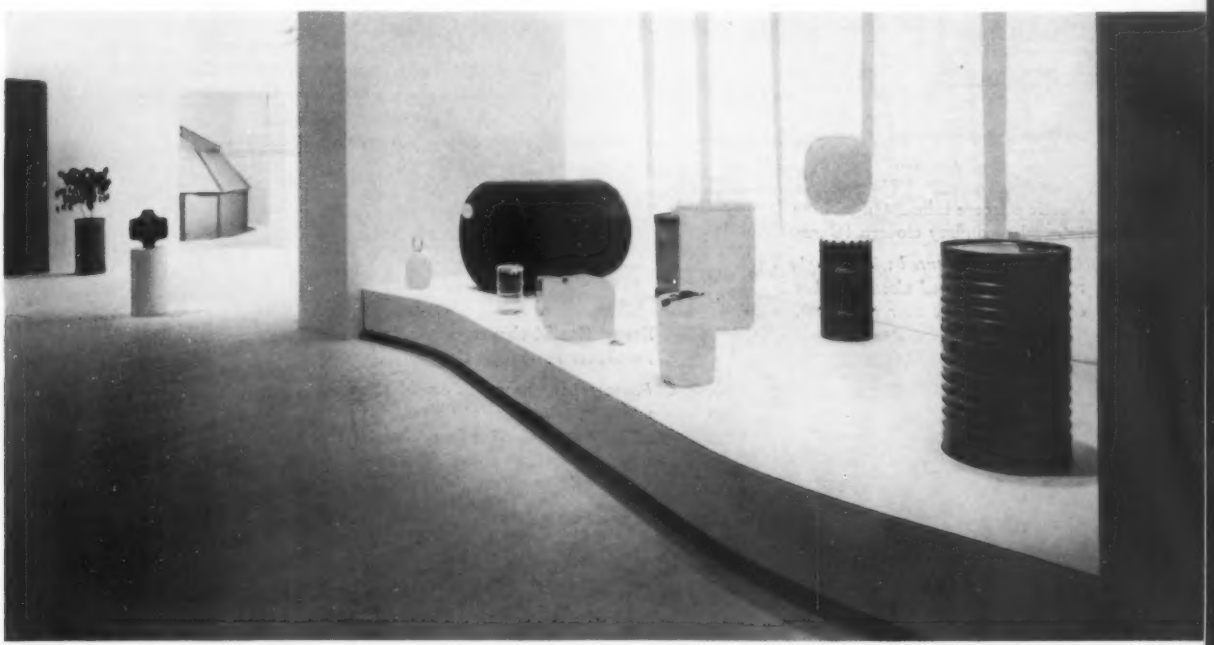
For these reasons, work-a-day packagers may find it difficult to accept in their lexicon of packaging such curiously remote objects in this show as a vinyl-film oxygen suit for laboratory workers (a package for a man); a disposable beehive-shaped corrugated dwelling (a package for people); a Swedish telephone (a voice package), as well as leather suitcases, jewelry boxes and briefcases. And



How new is new? *Contemporary bottle for Abbott's Sucaryl (a Raymond Lowey design) is placed in juxtaposition to an 1879 milk-glass bottle for mouthwash from Odol Chemical Corp. to illustrate enduring aesthetics of functional form—continuing ingenuity to devise convenient dispensing of a product.*

the Modern Museum

New York's world-famous institution for contemporary art pays stimulating tribute to the materials and forms of modern packaging, but fails to recognize the motivating force behind it



Like priceless sculpture, *drums and carboys are displayed as works of art "to reveal great refinement in straight-forward industrial packaging and adaptation of variety of materials—steel, polyethylene, glass, plywood—to beautiful, functional forms and efficient closures."*

Chanel No. 5 perfume cartons designed by Chanel in the 1920s.

"Elegance is enduring. This package is as beautiful as the day it was designed. When something is beautiful, why change it?"

The curator's reasons for the selections

To pinpoint the exhibit's purpose more clearly, MODERN PACKAGING chose a few of the packages for illustration here (identified according to the museum's labels) and asked Mildred Constantine, associate curator, to tell why they were picked. Her explanations are given in the accompanying photo captions.

package designers undoubtedly will feel slighted by the almost complete exclusion of graphics.

Yet none will fail to be impressed by this signal appraisal of packaging as a modern art form, or the skill of the museum directors in arranging a show that is attracting as many visitors as any exhibit in the museum this year. The museum has grouped the selected packages into two major categories:

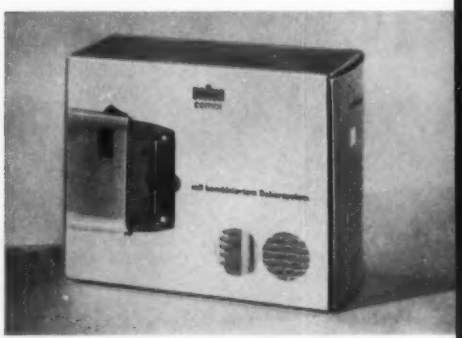
- *The disposable package,* intended to be thrown away after one use, such as wrapping paper, a toothpaste tube, a can or a bottle.
- *The re-usable package,* intended to have continuing use for its original purpose, such as drums and

Plastic squeeze tube fitted with an integral secondary closure (Germany).

"Cleverly manufactured with thought to its use. Attached closure makes it convenient for the user to reclose."

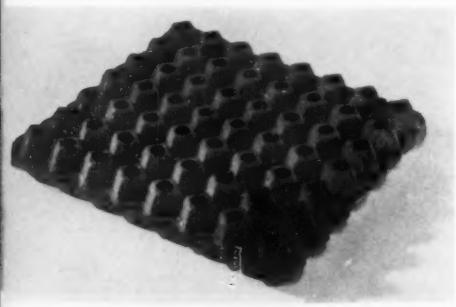
Folding box, Arabia-Notsjo Glassworks, Finland; designed by Kaj Franck.

"Unusual construction, decorative as well as functional. Wide mouth provides easy access when open, is decorative when closed. Handsome when made with colorful, high-gloss outer surface."



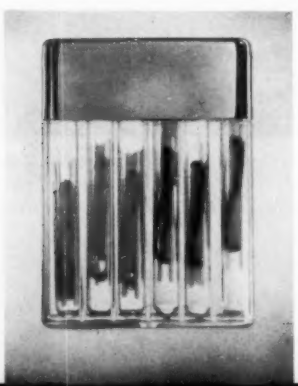
Braun Combi shaver carton from Frankfurt am Main, Germany.

"Photographic images in combination with economical use of typography makes communication immediate."



Charcoal Brix Co.'s Briquets package, designed by Frank Mustin.

"A completely working package—molded pulp helps to ignite charcoal; package may be broken apart so that any portion may be used. And it interlocks for stacking."



Pocket Surgiset, Ethicon Suture Laboratories; designed by Lippincott & Margulies.

"Handsome case of acrylic plastic with metal top is beautifully detailed to protect individual glass vials and their sterile contents. Information is immediately communicable through the transparent material."

other industrial bulk containers which are "seldom seen by the public."

In both categories are examples of what the museum calls "the working package," such as a pressurized spray can or a carrying case for slide projectors, radios, typewriters and other equipment.

The visitor is introduced to the exhibit by a panel of photographs portraying "nature's packages"—an egg, a grapefruit, a turtle, a pod of peas, a melon, along with 2,000-year-old primitive baskets.

Moving on, he sees displayed as though they were pieces of priceless sculpture, a collection of polyethylene, steel, plywood and aluminum drums and carboys. In other areas he will find pill dispensers, perfume bottles, new tetrahedron-shaped containers, packages of thermoformed and molded plastics, set-up boxes, folding boxes, molded-pulp containers, formed expanded plastics, heat-sealed pouches and envelopes, paper and textile bags.

Nearly every type of container and material is there, presented for its aesthetic quality, which, as it is pointed out, "is the result of a conscious effort to organize materials and functions into clear shapes and relationships, with a due concern for their effect on the eye." A few of the selections from the exhibit, illustrated in the photographs on these pages with Miss Constantine's reasons for singling them out, will help to explain more clearly the museum's purpose. She researched the subject for three years, two of them spent "just thinking." Much of the thinking was done on weekly forays to the supermarket, she says, because in private life as a wife and mother of two daughters, her experience with packaging is much like that of every other consumer. And she apparently has some of the same complaints that bother other shoppers: packages that are too hard to open, that do not carry adequate opening directions, that have no means of reclosure, that are not good-looking enough to go to the table, and that "strive so hard to entertain, amuse or make you hungry that they don't really enlighten you."

"Think how wonderful it would be on the eyes," she says, "if soap boxes just said 'soap.'" (Soap manufacturers who spend millions on brand-name building might have a different idea.)

This supermarket fatigue may be one reason for the complete disregard in this exhibit for the mer-

Accordion squeeze bottle, Eaton Laboratories.

"This reveals an inventive use of polyethylene material, adapted to a dispensing function."

Aero-Meter aerosol nasal spray, Rexall Drug Co.

"Excellent example of functional package with pleasing color fitments on metal container. No objection to having it around."

Color Obelisk for artist paints, Anker Co., Kolberg, Germany.

"Several functions in one unit. The individual plastic containers stack conveniently. No tubes to open; nothing to mix. Range of colors or multiples of one color are available. Containers are disposable."

Aluminum shaker can, Kaiser Aluminum & Chemical Corp.

"A convenience welcomed by every housewife; has handsome detailing of swivel closure."

chandising aspects of packaging—which many will argue are inseparable from the contemporary packaging concept.

Miss Constantine also dislikes constant package redesigning. "Why change, if you have something beautiful?" she asks, backing up her thinking by including the familiar, 20-year-old, white box for Chanel No. 5 perfume, carrying no other identification than the famous black border and name.

The decorative stopper of the show is a high window curtain completely made of fantastically long lengths of transparent-film strip packages containing colorful single doses of liquid shampoo, bath oil, hair dye and furniture polish.

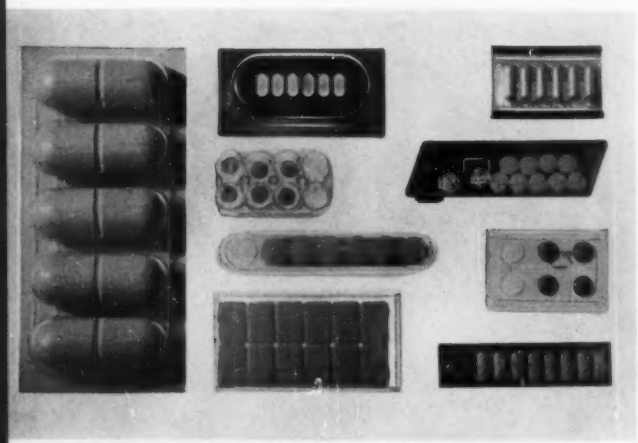
Professional packagers will see in the show very few package forms that are not already familiar. But the exhibit offers an opportunity to have a look at them in a presentation arranged from a completely detached point of view. The visitor hoping to pick up a hot sales idea here will be disappointed. But he should come away with a new respect for human ingenuity to create these useful objects for man's needs. As a packager, he may even be provoked to do a little soul searching after reading the wall-label admonition:

"An alarming number of packages are more elaborate and costly than the things they contain. Some packages are altogether wasteful. The exasperated victim of such proliferation struggles each year with tons of wrappings and with 'miracle' seals or closures impossible to open without special tools and adequate information."

The validity of this statement, of course, is open to challenge unless it is counterbalanced with one pointing out the essential economic functions of disposable packaging for protection, transportation, convenience, labor and time saving that are as inseparable from the utility of present-day living as a water main to bring necessities from place of origin to point of use—fresh and undamaged.

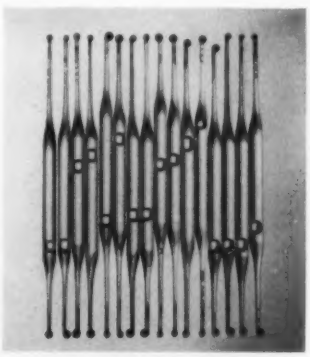
The entire packaging field can take pride in this conspicuous initial tribute to packaging as an art form and can agree with the museum's objective to inspire America's designers to even greater achievements. But this publication believes it would be remiss if it did not point out one seemingly serious oversight. In attempting to divorce packages almost entirely from their commercial climate, the museum has taken them out of the very contemporary environmental economic complex that has made them grow and in which they must live. This, to us, is like evaluating the design of an automobile without its wheels—or, indeed, this very exhibit without its wall labels.

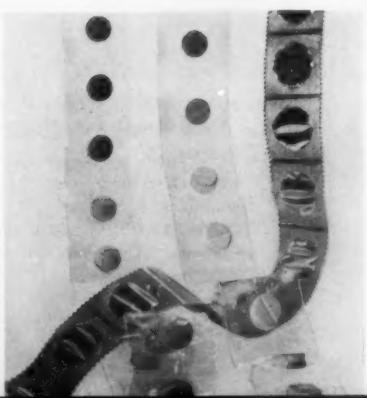
"The Package" was installed by Wilder Green, assistant director of the Department of Architecture and Design. It was made possible by the contributions of three co-sponsors: Container Corp. of America, Reynolds Metals Co. and National Distillers & Chemical Corp. of America.



Single-use containers—flexible strip packages, thermoformed plastics materials and glass vials.

"A passion for individual units has come into our lives. One-at-a-time dispensing has become very much a part of the daily routine. We like these handy units for packaging everything from pills to shampoo."





Suitable for framing, *handsome reproductions of 60 famous masterpieces are wrapped around stiff paperboard tubes that hold the bottles, then are overwrapped with printed cellophane and ribbon tied. The replicas measure 11½ by 13⅜ in., are printed on "pebbled" texture paper to simulate an oil finish.*

Art for liquor's sake

One-million-dollars worth of the world's famous paintings are being wrapped around five Schenley products in novel packaging bid for share of $500-million gift liquor market

In the annual gift-packaging marathons of the distillers, you may think you have seen everything. But not yet. This year it's Renoir, Van Gogh, Gauguin and a dozen other world-famous artists who will be on their mettle as super-salesmen in the nation's package stores!

Handsome full-color reproductions of 60 of the world's most famous paintings, suitable for framing, that are being wrapped around five Schenley products are just one more indication of the ingenuity it takes to find really distinctive new ideas in a field that continues to go all out for almost every known decorative packaging device.

Reportedly, Schenley has invested $1 million in preparing the reproductions, even going behind the Iron Curtain to obtain rights for 19 masterpieces never before reproduced outside Russia.

The replicas, measuring 11½ by 13⅜ in. and printed on a "pebbled" texture paper to simulate an oil finish, are being rolled around a stiff paperboard tube containing the bottles. The cylindrical unit is inserted in a color-printed cellophane gift sleeve which is secured at the top with either a ribbon tie or a tasseled cord. A brief history of the artist and the painting appears on the back of each print.

This packaging is being used for J. W. Dant and Echo Spring whiskies, Schenley Vodka of Elegance, Schenley Smooth American gin and Dubonnet wine. Each of the five products will use 12 different reproductions. Schenley commissioned three art experts to search Europe for the finest paintings available; 47 were selected for the program. In addition, the works of a dozen American artists are included.

This packaging, plus a comprehensive line of decanters and fancy cartons for other products, puts Schenley in a position to obtain a greater share of the estimated $500-million market in gift liquors. Schenley has nine of its products in decanters, 21 in gift wraps and another 12 products decorated with colorfully printed cartons.

The company's most expensive gift package is I. W. Harper's Collector's Decanters—a set of six, each hand engraved with the figure of the I. W. Harper man bowing to women in various scenes of the 1830 period. It retails at $77.70.

If there's any abatement in the binge for embellishment in the liquor field, this company's present packaging program certainly doesn't show it.

Now, the 3rd Machinery Show

Across two floors of New York City's Coliseum will spread the displays of 155 participants in PMMI's exhibition, Nov. 17-20. One day earlier, the Packaging Institute Forum opens at the Statler-Hilton

For packagers intent this fall on seeing under one roof a variety of equipment designed to solve a production problem, suggest new methods and techniques, or generally improve their packaging operations, their Mecca will be the New York Coliseum. There the third Machinery Show, sponsored by the Packaging Machinery Mfrs. Institute, opens its doors for a four-day run from Tuesday, Nov. 17, to Friday, Nov. 20.

This event, which will be scheduled on a biennial basis from this year on, offers packaging management of every level—corporate executives, production supervisors, engineers and foremen—a one-stop shopping tour of more than 4,000 different machines designed to boost the efficiency of almost any packaging line.

It is also an opportunity for busy packagers to broaden their packaging education and pick up new packaging ideas by examination of types of machinery other than those employed in their own plants and by attendance at the concurrent 21st annual Packaging Institute Forum, to be held in the Statler-Hilton Hotel from Monday, Nov. 16, through Wednesday, Nov. 18.

While the interests of most packagers will overlap, here are specific types of information that will be available to each level of packaging management:

For the *top executive*, there is expected to be a wealth of evidence of new production achievements stressing economies and efficiency. High speed will be emphasized, as always, but many machines—such as integrated packagers, case-handling equipment and filler-capper combinations—will also exhibit improved performance and labor saving.

For *production men*, this is a key exposition. More than ever before, these men will see extra emphasis on total packaging efficiency. Increased speed and reduction in operating personnel, both important aspects of this over-all concept, will be apparent in everything from unscramblers to casers. But production men will also find many marked advances in space-saving units—as exemplified by many integrated machines that combine two or more packaging functions in a single unit.

Engineers will have a valuable chance to see—in close proximity—several different types of machinery for almost every packaging function. Such comparison should enable them to evaluate varied solutions to the same packaging problems.

Mechanical engineers will undoubtedly be attracted to numerous new advances in functional machine design and several unusual techniques for performing both new and standard packaging operations—particularly in the field of machinery for sorting, filling and closing rigid plastic packages.

The "class room" for this concentrated course

in packaging engineering will spread over two floors of the Coliseum, covering more than 62,000 sq. ft., a 14% increase in area over the 1958 show. The number of exhibitors has increased to a new high of 155 this year.

Despite the location of the show in a major metropolitan center and the likelihood of increased attendance, show-goers are expected to maintain the high level of interest shown by the 9,869 packagers who thronged last year's exhibit in Atlantic City. To discourage curiosity seekers, PMMI has adopted a $2 registration fee. Registrants at the PI Forum will be admitted to the show free of charge.

The show will open at 10 a.m. the first three days and at 9 a.m. on the final day (Friday, Nov. 20). The doors will close at 6 p.m. on Tuesday and Thursday, 9 p.m. on Wednesday and 1 p.m. on the final day.

Pre-registration cards may be obtained from Hanson & Shea, Inc., 1 Gateway Center, Pittsburgh 2. Chairman of the show is Albert R. Stevens, vice president, Elgin Mfg. Co.

Twenty-five city blocks south of the Coliseum—at the Statler-Hilton—PI's 21st annual National Packaging Forum will kick off this full week of packaging activity. PI's three-day, subject-packed program starts Monday, Nov. 16, with morning business meetings at 10 a.m., a "spectacular" on food packaging at 11 a.m. and a 12:15 p.m. luncheon with a keynote address by William C. Stolk, president, American Can Co.

The serious business of seminars gets under way at 2 p.m. Monday with concurrent sessions on package marketing and on packaging research and development.

Tuesday will be a full day, the forum opening at 9:30 a.m. with three all-day seminars on production line and machinery, drug and pharmaceutical packaging, and printing. These sessions resume at 2 p.m. after a break for lunch and a talk by Miss Marie Kiefer, secretary-manager, National Assn. of Retail Grocers. Evening activities include a President's Reception at 6:30 p.m. and the annual awards dinner at which a company and an individual will be cited for outstanding accomplishments in packaging technology. Guest speaker will be Dr. Mason W. Gross, president of Rutgers University.

Wednesday's half-day seminars at 9:30 a.m. will cover industrial packaging, food packaging and closures. The closing luncheon will be addressed by Deputy Commisioner John L. Harvey of the Food & Drug Administration, the U.S. agency charged with enforcing the new Food Additives Amendment to the Food, Drug & Cosmetic Act.

Chairman of the PI Forum committee is Roy W. Abling of Merck, Sharp & Dohme. Advance registration forms for the forum may be obtained from the Packaging Institute, 342 Madison Ave., New York 17. Available this year for the first time are multiple-use registration tickets that permit the use of each day's ticket by as many as three different persons from one company and as many as nine from companies that purchase a three-day multiple-use "package" combination ticket.

The following alphabetical list—including all exhibitors who answered a MODERN PACKAGING questionnaire prior to the deadline date—provides details of most of the company exhibits, their personnel and hotel headquarters:

A-B-C PACKAGING MACHINE CORP. *Booth 315.* Exhibit of Model XSA automatic top and bottom short case sealer featuring two glue pots. *Personnel:* O. A. Rupp, H. M. Kenter, W. E. Cranor, B. Arnold. *Hotel:* Commodore.

ALGENE MARKING EQUIPMENT CO. *Booth 512.* Exhibit of flat box printer for carton sizes up to 50 by 65 in. in the flat at speeds up to 3,500 boxes per hour, printing all four sides automatically in one pass of the machine; four-way printer which automatically imprints one, two, three or four sides of a carton in set-up stage; versatile roller printers. *Personnel:* M. Mann, M. Amin.

[*Listing continued on page 262*]

POCKET PROGRAM

For your convenience, *Modern Packaging* has prepared a pocket-size program for both the Packaging Institute Forum (Nov. 16-18) and the Packaging Machinery Mfrs. Institute Show (Nov. 17-20), both in New York. This handy guide, listing all activities and talks at the forum and all exhibitors at the Machinery Show, along with a floor plan of the show identifying booth locations, is inserted inside the front cover of this issue of *Modern Packaging*. For additional copies, visit the *Modern Packaging* booth (417) at the PMMI Show, New York Coliseum.

At gateway *to British Packaging Show, visitors from all over the world cluster around the overseas reception desk. They had much to see: There were some 314 exhibits of materials and machinery and a display of 29 packages judged Europe's best of the year.*

Europe shows its finest

Fresh ideas in packaging and machinery are suggested at Britain's sixth International Packaging Exhibition & Convention; second annual Eurostar winners are unveiled

London in September was the scene of two events of great importance to packaging men throughout Europe—and of considerable significance to their counterparts on this side of the Atlantic who are seeking fresh, usable ideas in packaging and in packaging machinery.

The events were the sixth biennial International Packaging Exhibition & Convention (sponsored by the British Institute of Packaging) and the concurrent selection and display of winning packages in the second annual Eurostars competition (sponsored by the European Packaging Federation). Both the show and the awards were truly international. No less than 54 of the 314 exhibitors at the show represented countries other than England. The 29 Eurostar awards were shared among companies from seven European nations.

With some exceptions and innovations that will be news to American packagers, machinery on display at the Packaging Show paralleled in many ways the characteristics which are expected to predominate at the United States' own Machinery Show this month. Automatic machinery operating at faster, more economical speeds was everywhere in

evidence. New equipment to handle today's improved thermoplastics was a distinct trend. Still another trend was the wealth of new machinery for finer printing on containers.

Judges who selected the Eurostars—the best of a crop of packages which had previously won national honors in the country of their origin—expressed themselves as gratified to find so many entries using traditional packaging materials in new and more effective ways. On the other hand, they found relatively few uses of newer materials, particularly plastics, in contrast to the United States.

Machinery

Although progress in packaging materials and in containers was evident at the British Packaging Show, the most conspicuous advances were seen in the area of machinery. In particular, there was an increase in the number of machines for handling polyethylene and other thermoplastic films.

A German manufacturer (Hansella) attracted much interest with an automatic machine for enclosing individual pieces of hard candy in heat-sealed film with a tear tape—the first time that this has been done. The tear tape is imbedded in one vertical edge of each wrap during forming, filling and sealing. The new machine is said to operate at speeds up to 500 pieces per minute and to save 20% in packaging-material costs. Speed of operation is the same as that for the new twist-wrap machines for candies. One of these twist wrappers (Forgrove) was exhibited at the British show and also will be seen at the PMMI Show in New York this month.

Speed and efficiency in tubular-film wrapping of long, rigid articles was achieved by a British machine (Baker Perkins) which employs a fin heat seal to avoid contact between heat and product. The items are pushed along a track to meet the plowed-over web before wrapper sides and ends are sealed. Designed for use with heat-sensitive products, the unit's speed is 180 wraps per minute.

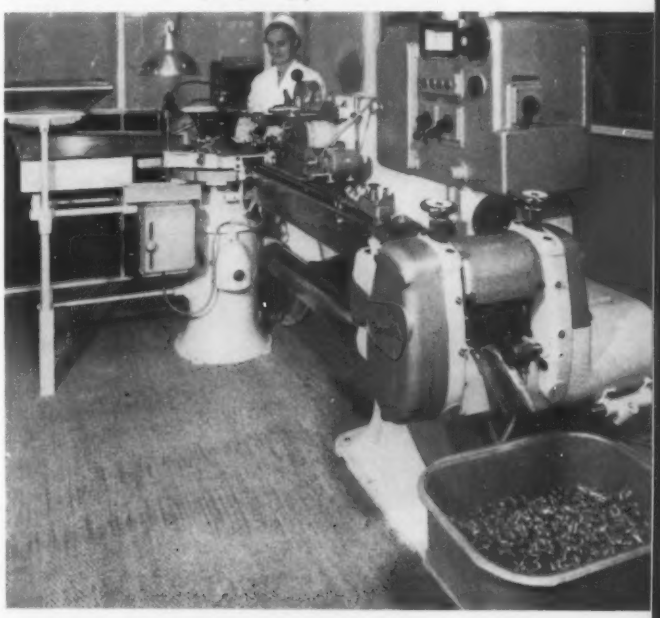
A significant advance in equipment for wrapping loaves of bread in polyethylene film was the feature of another British exhibitor's booth (Clavell Bate & Nephews). The unit's chief departure from conventional polyethylene bread-wrapping machines is that it makes secure end seals in the film itself, without using end labels or wax. This same manufacturer showed a machine (which it reportedly developed two years ago, apparently pre-dating American units of this type) for overwrapping cartons and other regular-shaped objects in polyethylene. It uses a novel and effective sealing technique that eliminates the need for cooling operations. The wrap is first dab welded along the base seam. A fibreglass tube containing an electrically heated liquid medium provides the flexibility required to seal over irregular or resilient surfaces. The sealing area is very narrow and bonding is very rapid.

An apparent breakthrough to greater speeds in the gas charging and clinching of aerosol containers is achieved by a new Swiss machine (Aeratom) seen at the show. The propellant is charged between the valve and the rim of the can, rather than through the valve as is conventional. Immediately after charging, crimping is done at the same station.

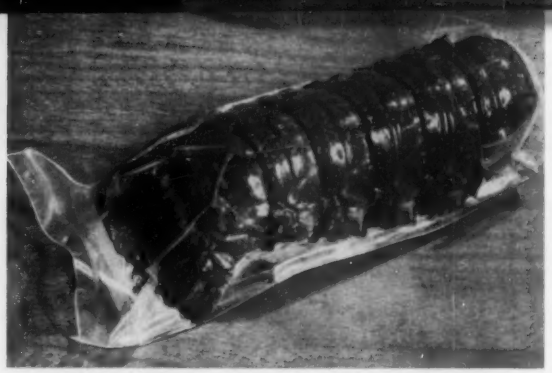
A second Swiss machine (Swiss Industrial Co.) is one that forms, fills and seals moisture-resistant wrappers for stacked cookies at up to 80 packages per minute. A greaseproof, rigid corrugated-paper band and a greaseproof paper wrapper are first applied around the stack, which is then overwrapped with heat-sealable cellophane. The ends of the three-ply wrap are folded under and labels are heat sealed to both ends.

Progress also was shown in higher-speed, more efficient printing techniques. One example is a British machine (Milford-Astor) for dry-transfer printing on cartons, plastics, metal and glass. Data to be transferred to the container surface are preprinted in reverse on the underside of a reel of vinyl tape. Heat and slight pressure transfer the impression. By ganging the reels, various colors can be achieved on one roller. Considerable interest

Typical *of the advanced, high-speed packaging machinery seen at the show is this Hansella machine for heat sealing individual hard candies in tear-tape-opening film.*

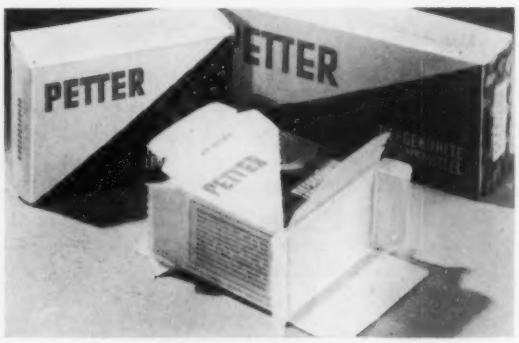


Eurostar winners: seven of 29 packages judged best in all Europe



Vacuum packed *in nylon film on the high seas by French fishermen, this lobster is kept on ice, then quick frozen ashore. The film package cuts weight loss by 7 to 8%.*

No adhesive *is needed to set up this Scottish triangular carton for candies. Low-cost carton makes attractive presentation package. Design, W. M. de Majo, London.*



Leakproof *carton for frozen vegetables is wrapperless and linerless, but has heat-sealed paper beneath end flaps. Carton, Falpa-Papierwarenfabrik; design, Hugo Koszler, both Vienna.*

also was excited in a new machine designed for printing on blow-molded plastic containers at speeds of 300 per hour.

To avoid the stretching and distortion that can occur in polyethylene film during printing, a new British machine (Kuffall & Co.) features a large impression cylinder that holds a 14-ft., 9-in. length of web as it rotates successively at high speed (350 ft. per minute) under printing cylinders.

Eurostar winners

Protective packaging with the emphasis on traditional materials was the dominant theme of the 80 entries in this year's Eurostars competition. However, in a sampling of the 29 containers judged best in show, there is enough of the unusual to provide valuable ideas to American packagers.

A striking example is a vacuum-sealed nylon-film package developed by French lobster fisheries to minimize weight loss in fresh-caught lobsters. The shellfish are cleaned and packaged within minutes after being taken from the sea. The lobster is placed on a foil-laminated fibreboard tray before being bagged and iced. When the boat reaches port, the film-packaged lobster is quick frozen.

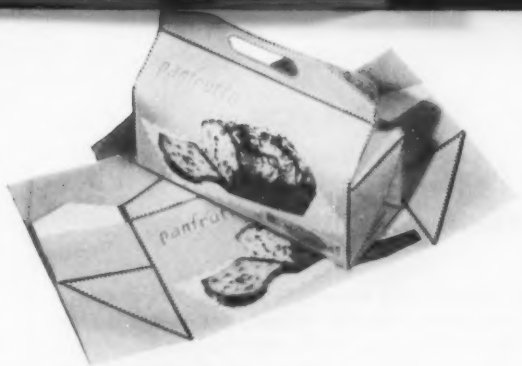
A significant expression of the European packager's attention to the protective factor is the leakproof end-sealed carton, coated inside and out with polyethylene, for Hans Petter (Austria) frozen vegetables. The coatings and end papers make the linerless, wrapperless carton resistant to passage of moisture, to prevent dehydration and preserve aroma. It also gives the carton a smooth interior.

Eye appeal and user convenience are combined in a decorative paperboard carton with carry handle, for packaging fruitcake made by Bugnone S.p.A., Italy. It is formed from a one-piece blank.

One of the most unusual and interesting of the 1959 Eurostars is a plastic-bag-in-metal-can combination for pasta and sauce products. It was developed for another Italian packager, Ilca Simmenthal Meridionale Aprilia. The bag, which is made of polypropylene, keeps the sauce and pasta separate until they are served.

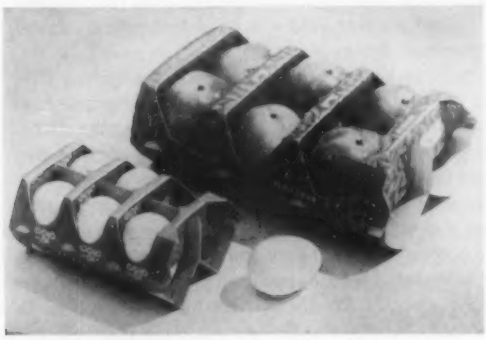
A British packager, W. A. Gilbey, uses a sleeve-and-carton combination to give gift appeal and sturdy protection to a set of six glasses. The decorative sleeve, which has a carry handle, holds two cartons containing three glasses each. The cartons are slidably removable from the sleeve and have die-cut openings for display. Paper cones locked into platforms in the top of each carton project down into the glasses to keep them in place.

John Millar & Sons, Scotland, received its Euro-

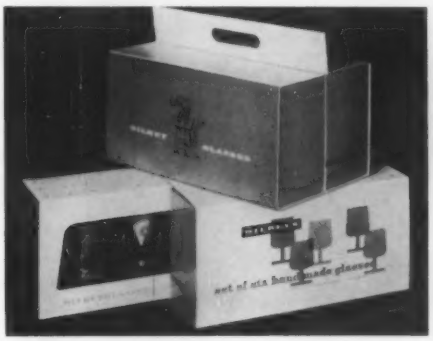


One-piece blank *that becomes a carry carton is an Italian idea. For gift giving, the perforated price tag can be easily stripped off the carry handle.*

Bag-in-can *combination (note cross section) keeps Italian sauce and pasta separate until used. The polypropylene bag is crimped in under container lid.*



Cradle carton *for eggs or fruit is formed from one-piece blank. The Swiss container locks contents in place, cushions them against possible damage in handling.*



Twin cartons *in handled sleeve make up a sturdy, attractive gift pack for a British glassmaker. Paperboard cones hold glasses in place. Design, W. M. de Majo, London.*

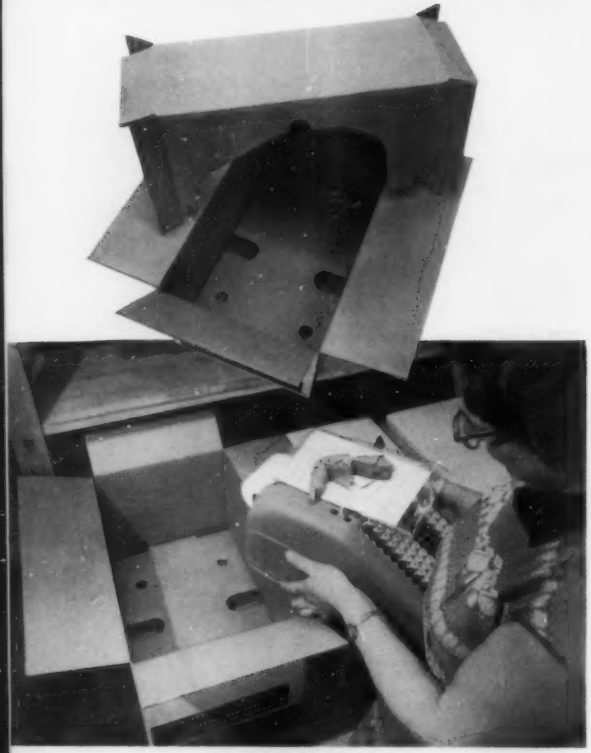
star for an unusual triangular paperboard carton that achieves a novelty effect at low cost. The two sides of the "triangle" fold open to reveal a film bag of candies nested inside a die-cut opening. Assembled without adhesives, the carton is closed by tying a bow in two pieces of string attached to the two side panels.

A compartmented egg carton, ingeniously constructed from a one-piece paperboard blank, was a winner for Bronand & Leuthold of Switzerland. Eggs (or even such larger symmetrical items as apples) cannot fall out of the economical carton, which cradles its contents for protection.

Among the other winning entries were such items as: a multi-ply pouch for powdered soups . . . a baler bag for bottled products . . . a cellulose-acetate cell package . . . a paperboard box with a thermoformed plastic nesting tray for household tools . . . and an embossed polyvinyl-chloride pocket pack for women's hosiery.

In addition to these awards for commercial packages, the Eurostar judges presented a special award to "the most outstanding new material for packaging purposes." This year's winner was Moplen polypropylene, developed by Montecatini Co., Milan, Italy. (See "Machinability of Polypropylene Film," this issue, p. 187.)

Breakthrough *to higher speed in charging and clinching of aerosol cans is promise of this machine.*



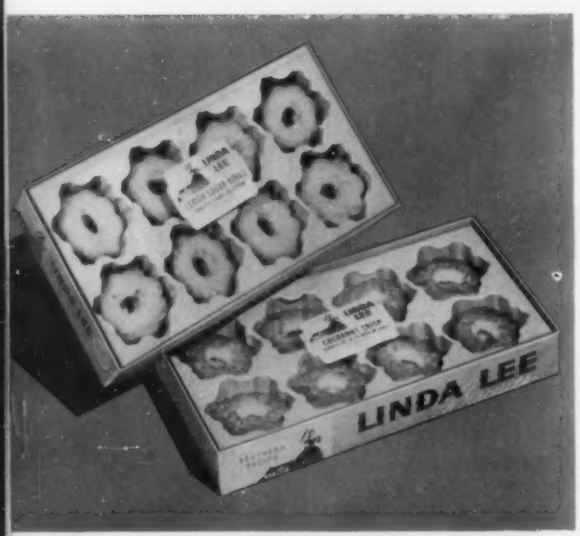
Protection at a profit

How cooperation between the packaging-engineer forces of a manufacturer and its supplier company can lead to lower costs and improved package performance is illustrated by the experience of Smith-Corona Marchant, Syracuse. Some time ago, the company's packaging engineers set out to improve the protective properties of the corrugated shipping carton for a line of adding machines. The container then in use required 11 die-cut corrugated inserts. Placement of this interior packaging was time consuming and the record showed it did not provide adequate protection against damage to the machine during shipment.

Together with its carton supplier, Smith-Corona developed a simplified system of interior protective packaging that has reduced over-all packaging costs 25% while virtually eliminating in-transit product damage. Only two corrugated inserts are now used, for faster, more efficient packaging. They are: a fold-over base with die-cut holes for the legs of the machine and a die-cut "saddle" that slips snugly over the top. These two pieces anchor the instrument firmly in place, cushioning it against exterior shock. *Shipper by Union Bag-Camp Paper Corp., 233 Broadway, New York 7.*

COST

PVC trays cut cookie-packaging costs by 33%



Lightweight, vacuum-formed polyvinyl chloride trays are being used by a Canadian packager to keep the retail price of a new line of cookies competitive with other brands. The packager is Christie, Brown & Co., Toronto.

In preliminary package planning, the company decided that conventional fluted glassine cups, though low in cost, would be impractical. The large number of workers required in hand packaging would balloon labor costs and consequently price the product out of the market. It was then that the packager seized on the idea of using formed PVC trays set in paperboard tray cartons. Because they enable workers to use both hands for packing cookies, instead of using one to reach for the glassine cups, the plastic trays greatly increase packaging speeds. To Christie, Brown, this means a 33% reduction in comparative labor costs.

In addition to packaging economy, the PVC trays provide excellent product protection. Nestled in the cup-like depressions, the cookies are cradled against shock damage. For visibility and added protection, cartons are overwrapped with polymer-coated cellophane. *PVC trays by The Pantasote Co., Panta-Pak Div., 415 Madison Ave., New York 17.*

Economy on the side

When Style-View Aluminum Awning Corp. of Miami expanded its product line to include mirror-front medicine cabinets, it ran up against a three-pronged problem: slow packaging speed, insecure carton closure and excessive product damage during shipping and other handling. Now, however, the company has reduced packaging time for this product by two-thirds, cut carton-closing costs by some 60% and practically eliminated handling damage to cabinets. Style-View credits this abrupt about-face to a more protective shipping container and a powerful new stapling machine that seals the filled carton rapidly and securely from the side.

The company's former shipper was a regular slotted corrugated carton without interior protection. The carton was closed with gummed paper tape. Not only was this closure method slow, says the packager, but it was insecure, because the tape occasionally broke under the cabinet's 15- to 20-lb. weight. The new shipper is a full-overlap corrugated carton which is stapled shut in a few seconds. Corrugated pads cushion the cabinet's mirror front inside the carton. *"Side-strike" stapler by Bostitch, East Greenwich, R. I. Shipping carton by Owens-Illinois, Paper Products Div., Toledo.*

CUTTERS

At 47% less, shipper becomes two display cartons

Improved display appeal and a 47% reduction in packaging costs are reported by Romick's International Tobacco Co., North Hollywood, since adopting an interesting break-apart shipper-display carton for imported Prestige Mixture pipe tobacco in polyethylene pouches.

Easy break-apart is afforded by two parallel diagonal perforation lines that run completely around the rectangular paperboard carton. The retailer simply breaks the carton along the perforation lines to split the package into two identical slant-sided counter-display boots. Each contains six pouches of tobacco. After the shipper carton is snapped open, the center section that remains can be discarded.

Because the unusual carton is designed to become two identical display units in the store, the same copy and design elements are printed at each end. Background color on the lithographed container is a bright red. The product name appears in reverse white lettering on the front and side panels of each display boot.

Romick's credits its new carton with increasing impulse sales of Prestige Mixture tobacco. Retailers like it, says the company, because it requires little counter space.

A long-range goal of more than 550 new or revitalized packages is the largest single phase of a broad new corporate-identity program now unfolding at Abbott Laboratories, North Chicago. This major pharmaceutical manufacturer proposes to dress up its entire line of packages—establishing an individual character for each and a family resemblance for all—at a cost kept to the lowest possible figure through careful advance planning. All this while satisfying strict Governmental and professional requirements for a product line that ranges from capsules to granulars to liquids to salves.

To execute this company-wide project—initially concerned with surface design, but expected eventually to encompass new containers, materials and production techniques—the advertising department and 15-man packaging subcommittee will take on increased responsibilities. Under their direction, all Abbott packaging will soon boast:

1. A distinctive new trademark—a stylized and symbolic lower-case "a"—which research has shown to be effective in the most minute sizes as well as the largest. It is equally suitable for all types of labels, molded plastic caps for bottles, printed tubes, corrugated shippers and other types of containers. And it contrasts sharply with the symbols and trademarks of competitors.

2. A carefully chosen spectrum of 10 package colors in the "medium-intensity range," selected for efficient production and the emotional response they engender alone and in various combinations.

3. A top-management-approved packaging plan which encourages increased attention to packaging generally by all departments of the company. The plan sets up a flexible yet clearly defined framework for future new-product packaging.

This last point is most significant in view of the constant change which characterizes the whole ethical-drug field. As new drugs are introduced, many of them blaze brightly but briefly, and are soon upstaged by more potent newcomers.

The packaging plan will enable Abbott to take advantage of all possible packaging advances developed by suppliers and the company's own packaging department. Yet forthcoming packages—no matter how radically they may depart from previous practice—can still be fitted to Abbott's over-all corporate packaging image for years to come.

Abbott was moved to embark on its new corporate-identity program by one simple fact. Its pack-

First redesign *in Abbott Laboratories' new packaging program is for this line of anti-coagulants. Stylized and symbolic lower-case "a" trademark dominates labels and surface designs and appears in vibrant color or in white drop-outs.*

ABBOTT

New trademark, new colors and a schedule of line-by-line redesign will spruce up company's 550 pharmaceutical packages in a 10-year program that sets the pace for stronger corporate identification

aging line-up had grown without plan. The result, by the company's own admission, was chaotic. In common with many firms which enjoyed rapid postwar growth in both sales volume and new-product introductions, Abbott had been so busy researching and developing new products that not enough attention was or could be paid to the matter of package integration.

In the past two years, Abbott has become increasingly aware that the packaged products in its substantial line bear little or no relation to each other—and some have considerably too much resemblance to competing products. Because they share the same stringent quality controls, labeling requirements and use demands, nearly all ethical pharmaceuticals are subject to this pitfall of packaging sameness.

Few of Abbott's present packages are downright bad. Some are excellent.* But viewed overall, Abbott frankly concedes, its diverse line lacks strong corporate identity and family feeling. The closest the company has come to widespread use of a correlated package element is its blue color and even this is a rather anemic tint. Logotypes

* See "Functional Beauty," MODERN PACKAGING, May, 1958, p. 178.

Old packages, *despite gracefulness of most recent vitamin and Sucaryl containers (right), demonstrate a chaotic variety in design and typography and a lack of recognizable unity. Light blue, Abbott's traditional packaging color, is replaced by a spectrum of 10 intense hues.*

Physicians' samples *are dressed up with the new trademark, new colors and strikingly modern typographical designs.*

range from curly Gothic script to squat sans serif.

When last fall the Abbott management decided that a face lifting was in order, it realized that the company couldn't economically scrap all its packages at once or invest, for the time being at least, in extensive new packaging equipment.

Trademark

A new and effective trademark was placed first on the agenda. The design firm retained by Abbott made a thorough study of competitive drug packaging. Field teams were dispatched to pharmacies, hospitals and doctors' offices to analyze storage and use habits. Existing trademarks and color schemes were carefully evaluated. At the same time, Abbott packaging people checked and rechecked packaging-line procedures, reviewed Government requirements, inventoried existing containers and reported on those which must be retained for some time and those which could be revamped in the near future. Competitive situations in various product lines were studied and recommendations made for the scheduling of packaging improvements in order of need.

The new trademark evolved slowly. Abbott's design firm analyzed the limited number of geometric forms available—squares, triangles, ovoids, parallelograms—and found that nearly all had been preempted in some form. So had such well-known symbols of healing and knowledge as the flame, caduceus, chemical apparatus of various kinds, flasks and flagons. Nearly all such pharmaceutical symbols were studied and discarded, as were different shapes and forms of Abbott's initials.

New bottle *for hospital solution (right) features new trademark on label as well as shoulder, replacing octagonal emblem and rings traditionally used by company on typical old bottle (left).*

The trademark finally advocated by the design firm grew out of the symbol of a snake. Probably no single symbol could be more repellent to the public at large, although use of the snake motif goes back for centuries in medical and pharmaceutical tradition. But in its final form, all serpentine suggestion is gone. Abbott's design becomes a strong, modern, distinctive and versatile "a." It's expected to be at home on packages of all types, on shipping containers, in advertising and company publications, on letterheads and invoice forms, in giant size as a dominant decoration for new Abbott buildings. (The "a" symbol soon will go up on the handsome new research-center addition now being built at the company's headquarters site.)

Colors

With redesign, the somewhat feeble but traditional "Abbott blue" is vanishing. In its place is substituted a deeper, more vibrant blue and nine other intense and medium-intensity shades of browns, reds and greens, none of which is apparent in designs used by competing packagers. This spectrum was chosen over a single color for interest, flexibility and greater appropriateness to the product and market.

Abbott produces products for babies, for women, for men, for the ill and for those who are well and wish to stay that way. The range of 10 colors makes it possible for the company to address its varied products more specifically to their respective markets. Even though most of the products are designated by prescription and are not sold over the counter, it is felt that the physician and pharmacist are influenced by appropriate color choice, as are consumers. And the stylized "a," unchanged in basic outline and proportion regardless of product or package color, will carry most of the weight of company identification. Color will be used as a secondary element, according to the company, to create a favorable emotional climate.

Timetable

Abbott is implementing its package overhaul in an orderly and gradual fashion. Priority goes to the products considered most lacking in packaging impact, weighted by sales volume, competition, length of expected sales life and other factors. The good packages—such as the stunningly proportioned Sucaryl and vitamin bottles—will remain largely unchanged for some time.

First products to be repackaged are Abbott's line of anticoagulants for treatment of circulatory diseases. Since this group of drugs is sparking much medical interest right now, one of them was chosen to be first in the new [*Continued on page 236*]

SUPPLIES AND SERVICES: Trademark and redesign by George Nelson & Associates, 18 E. 50 St., New York 22.

"Plant breakage of Knox Glass is less than 1%" says Purchasing Director of major U. S. bottler

"A major factor in our using Knox Glass," says the Purchasing Director of one of the nation's foremost soft drink bottling firms,* "is the very low breakage we have been getting with their bottles.

"For the past few years, our plant breakage has been in decimal points of 1%, a figure which, considering the human element, is practically irreducible.

"No matter how you look at it—in terms of product quality control, customer acceptance, and sanitation—glass containers are easily the best and safest way to package soft drinks. In our business, we use a tremendous variety of bottles for both our flavor and cola lines.

"And we've been using Knox Glass as a major supplier for more than 20 years. Right now, our main purchases from Knox are flint bottles in quarts, 16-ounce, and 12-ounce sizes—both in returnable and one-way bottles.

"Because our company is expanding—especially since our acquisition of . . . (a nationally known carbonated beverage line*) . . . and our overseas territories—we shall be using more Knox bottles in the future than we do today. Knox Glass, so far as we are concerned, has withstood the test of time and the demands of the marketplace, and they will continue to be one of our most important suppliers."

Find out how Knox Glass' 35 conveniently located sales offices can play an important part in furnishing you quality, reliability, and service for your bottling needs. Contact Knox Glass, Inc., Knox, Pennsylvania.

*Name available on request.

the new | **KNOX GLASS**

A message of importance to all food packagers affected by the New Food Additives amendment

Many packagers are concerned about meeting the requirements of the 1958 Food Additives Amendment to the Federal Food, Drug and Cosmetic Act. The new regulation prohibits "the use in food of additives which have not been adequately tested to establish their safety."

Any compound in a packaging material is under question if it migrates to the food product. The burden of responsibility in the use of materials is now on the packager.

CELANESE OFFERS F.D.A. ACCEPTED PACKAGING FILM AND SHEETING NOW!

Celanese, some time ago, reviewed with the Food and Drug Administration the composition of various acetate films and their suitability for packaging foods. Years of animal feeding tests were made on a key ingredient at the request of the F.D.A. to establish the safety of this ingredient. The result of this work proved the safety of the ingredient, and enabled the F.D.A. to accept these special film compositions.

P903, P904, P912 — Cast films noted for clarity and perfection of surface.

S600, S603, S650, S653 — Extruded films having good surface characteristics although not as optically clear as P900 Series.

S732 — Extruded Sheeting having good surface characteristics. Semi-rigid, but can be thermoformed and otherwise fabricated.

To assist processors in the selection of F.D.A. accepted packaging, Celanese has prepared an informative folder covering Celanese Acetate Film for acceptable food packaging. For your copy, return coupon on opposite page.

Celanese Corporation of America, Plastics Div., 744 Broad St., Newark 2, N. J. Celanese®

Canadian Affiliate: Canadian Chemical Company Limited, Montreal, Toronto, Vancouver.
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Celanese ACETATE SHEETING AND FILM

Celanese ACETATE...

ideal for food packaging

Celanese Acetate is known in the food field as the "breathing wrap". Although waterproof—remaining crisp when wet—it is permeable to moisture vapor, carbon dioxide and other gases of food metabolism. This property is vital to the correct packaging of fresh vegetables and fruits. This "breathing" quality of acetate films contributes to a fog-free, sparkling food package—resistant to the growth of mold and fungi. It is also highly greaseproof.

Celanese Acetate has good dimensional stability, excellent printability, and long shelf life. It is easily fabricated into packages and containers by both manual and machine packaging operations. Types of food packages made with the film include window boxes, window bags, overwraps for use in direct contact with food, window envelopes, and window cartons. Acetate sheeting is used for transparent rigid containers, telescope and sliding lids, blister and skin packs.

New folder describes types of acetate film and sheeting available from Celanese and how you can use them in food packaging.

Celanese Corporation of America, Plastics Division,
Dept. 108-K, 744 Broad Street, Newark 2, N. J.

Please send me folder, "Celanese Acetate Film and Sheeting for F.D.A.-Acceptable Food Packaging".

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Company _____

Address _____

City _____ State _____

DISPOSABLE COOLER
Service-type promotion to sell new beverages, premium brands. Holds cold and melted ice in; easy to carry.

SELL 3-PAK . . . for frozen juices. Merchandise three of a kind or combinations. Makes customers pick up more than one or two.

BUILD BRAND PREFERENCE, PEP UP SALES WITH THESE NEW LOW-COST PACKAGING IDEAS

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Novel fold-off carton makes ice cream an attractive "convenience" food, novel enough to command premium price.

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TAKE YOUR PICK! Here are four new packaging ideas created to perk up sales, make shoppers reach for your brand first. They are typical of novel, sales-appealing merchandisers that can be made now from available stocks of low-cost liquid-resistant paper and paperboard. If you're interested in one or more of them, see your regular paper products supplier. He can obtain the liquid-resistant paperboard from leading paper mills who size their stocks with Monsanto **MERSIZE.®**

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A meter for film clarity

New instrument, using a mirror to pass a beam of light twice through the film at an angle, provides accurate evaluation of visibility as in an overwrapped package.

*By P. M. Hay, C. P. Evans and K. W. Ninneman**

An important characteristic of a packaging film is its clarity. Most evaluations of clarity by film producers and users are subjective and unstandardized, but are useful for such diverse purposes as improving a film-making process or choosing among competitive films. Improvements in methods of measuring clarity have always been needed and have led to the development of two different types of tests, instrumental and visual.

Many instrumental methods are under study in various laboratories. One, A.S.T.M. Method D 1003-52, has been standardized and widely used since its publication in 1949 as a tentative method (1)†. The procedure involves the use of either a haze meter or a special recording spectrophotometer. The results are expressed in three parts: total luminous transmittance, diffuse transmittance and percentage haze. A.S.T.M. Method D 1003 was intended for optical evaluation of thick specimens of very clear

* The authors are with the Film Research & Development Dept., Olin Mathieson Chemical Corp., New Haven, Conn.

† Numbers in parentheses identify References appended.

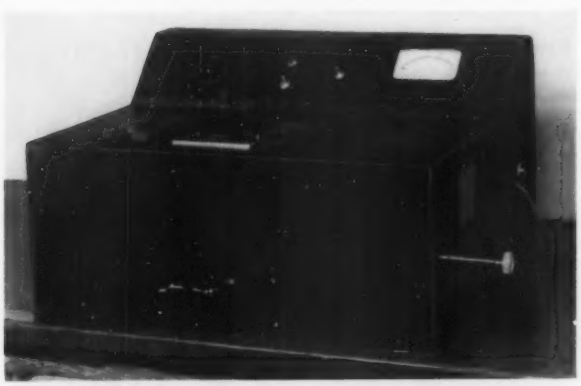


Figure 1. *Photographic view of Olin clarity meter is illustrated above. Film feeder assembly is located on top of the unit. Angle adjustment knob and angle indicator are on the front and the film clamp clutch is on right-hand side.*

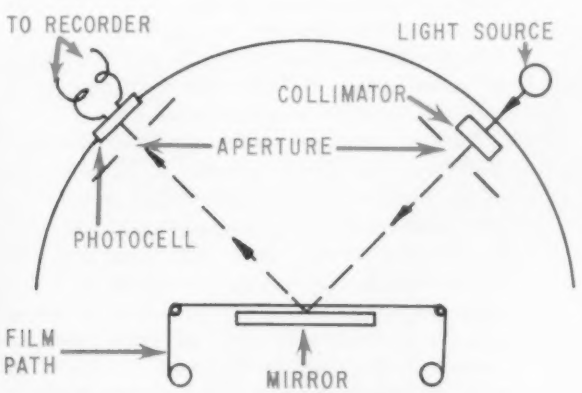


Figure 2. *Schematic diagram of Olin clarity meter. Light source is a 300-watt projection lamp. Round beam constricted to ¾-in. diameter passes through film sample, is reflected by mirror ¾ in. below and is recorded after passing through another ½-in. aperture to photocell.*

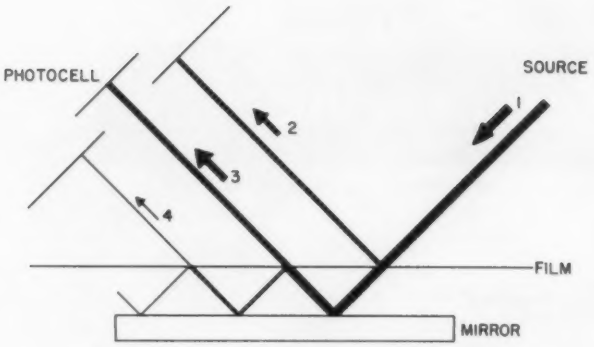


Figure 3. *Paths of light rays transmitted and reflected by film specimen. Most of light reflected from upper and lower surfaces of film does not reach photocell.*

materials and has not given good correlation with visual tests on films such as polyethylene and polyvinyl chloride. The A.S.T.M. Committee D-20 on Plastics recognized the need for further developmental work on measurements of optical properties of plastics, especially films, and reactivated Subcommittee IV, Section D in 1955 (2). A progress report was issued recently (3) and the work of the committee is continuing.

Because of this apparent lack of an instrumental method, or of an instrument suitable for measuring the clarity of thin films, alternate methods have been devised in many laboratories. Webber (4) developed a special apparatus to be used for measuring transparency of sheet materials after he had found difficulty in correlating haze measurements with "see-through" clarity determined visually. In Webber's study, percentage transmission was determined on a pivotal sphere photometer according to A.S.T.M. Method D 1003. Visual clarity was evaluated by noting resolution distances ranging from 0.2 in. for a highly diffusing material to 390 in. for a sample of optical glass. Webber's instrument gave good correlation with the resolution distance test.

Another instrument, which measures low-angle scattering, was recently reported to be useful for clarity measurements (5). Other test procedures employ visual ranking, arranging a group of specimens in order of decreasing clarity. When controlled conditions exist for viewing the test specimens, visual ranking by a test panel is a good method for rating a series of samples in order of clarity. By this method, however, one cannot assign a value to an individual specimen, except for a word rating such as good, fair or poor, or by ranking the test specimen in a set of standard films. Some methods, such as Webber's (4), use standard eye charts or resolution charts and determine the resolution distance.

Another deficiency of most visual test-panel methods is that they place the film at a distance from the target greater than that met in most packaging uses, where the film and the package contents are usually in contact. This situation is a consequence of two factors. One is the natural tendency to examine a film at arm's length against a distant background; the other, the increased difficulty of detecting graininess, waviness, fish eyes or striations when the object viewed and the film are in contact.

In the evaluation of clear films such as cellophane or cellulose acetate, a visual-ranking test must use a distant background to magnify the small differences. On a visual-quality basis, all of these films would be equally acceptable as overwraps. Hazy or grainy films like polyethylene may be rated more readily when in direct contact with the target; but such a test situation has not been used and these films too have been rated against the more distant target, as in the case of clear films. This has resulted in assigning misleading ratings to films destined for use as overwraps.

Still another difficulty with most visual test methods is that the light which illuminates the target originates behind the film. This does not correspond to the packaging situation where light passes through the film, illuminates the contents and is reflected back through the film to the viewer.

Because of these various difficulties, we undertook to design a clarity meter for quantitative measurement of the optical properties which make a film suitable for packaging purposes. At the same time we believed it necessary to evaluate the reported instrumental and visual methods of measuring transparency, as well as the theories of optics and vision. There have been many published reports of such studies, one of the earliest of which, concerned with glassine, is especially pertinent (6).

Principle and theory

The clarity of a specimen of transparent packaging film is proportional to the amount of light which is transmitted without distortion. Clarity of the material will be less than that of air because of the following losses from the incident light beam:

1. Light reflected from the surfaces of the material as from a mirror.
2. Light scattered in all directions by roughness of the surfaces or by haze in the interior of the specimen of film material.
3. Light refracted from the main beam by inhomogeneities such as fish eyes in the film or striations on the surface.
4. Light absorbed by color bodies.

Clarity meters evaluate the transmission of light by the response of a photocell to a beam of light.

Two readings are usually made, one with a sample in the light beam and one without. If we assume a linear relationship between photocell potential E and light intensity, the following equation expresses the situation when a sample is in the beam:

$$E = E_0 - E_1 - E_2 - E_3 - E_4 \qquad (1)$$

where E_0 is the photocell potential with no sample in the beam and E_1, E_2, E_3 and E_4 are the losses of potential resulting from reflection, scattering, refraction and absorption, respectively. Dividing Equation 1 by E_0 gives

$$E/E_0 = 1 - (E_1 + E_2 + E_3 + E_4)/E_0 \qquad (2)$$

The term E/E_0 corresponds to our definition of clarity (fraction of light transmitted undistorted) and the term $(E_1 + E_2 + E_3 + E_4)/E_0$ represents the total loss of clarity. Since clarity is expressed conventionally as a percentage, E/E_0 is multiplied by 100. Any instrument which passes a beam of light through a specimen and measures the percentage of the light which is transmitted undistorted and does not respond to the light which is reflected, scattered or deviated by refraction will measure clarity as defined.

In most instruments for measuring clarity the light source, sample and photocell are mounted in line, as in a conventional colorimeter or spectrophotometer. Much care is often taken to refine the optics so that the light rays are parallel and the included angle of the cone of light originating at the sample and directed at the photocell is very small. Samples are always placed perpendicular to the light beam. In designing the instrument which is described in the next section, we intentionally departed from this straight-line geometry in order to approximate more closely the actual packaging situation in which the light passes through the film twice, usually at some angle, and the distance between the film and package contents is usually small.

The Olin clarity meter

The Olin clarity meter was designed to reproduce what a viewer sees when observing a wrapped package. In order to observe what is inside the wrapper, light rays must first enter the package, be reflected from the object inside and return through the overwrap to the viewer.

The Olin clarity meter (Figure 1) was designed following this same pattern. The viewer was replaced by a photocell fitted with a "Viscor" filter to adjust the spectrum of the light beam to correspond with the sensitivity of the human eye. The photocell was attached to a strip-chart potentiometer. In order to measure only the light losses associated with the packaging film, a totally reflecting, first-surface mirror was used in place of a packaged object. A collimated beam of light was used as the source.

A schematic diagram of the optics is given in Figure 2. Light from a 300-watt projection lamp is collimated by a lens system and cut to a round beam of light ¾ in. in diameter by an aperture. The collimated beam passes through the film at an angle, is reflected from a polished metal first-surface mirror, again traverses the film and falls on a Weston "Photronic" photocell after passing through another aperture ½ in. in diameter. The light source, collimator and aperture are mounted on an arm pivoted at a point in line with the mirror. The photocell and its aperture are similarly mounted. Both arms are connected mechanically so as to make the same angle with the normal. Measurements can be made over a range of angles from 22 to 60 deg. from the normal. The angle is indicated on a scale on the front of the instrument.

The film, in the form of a strip 3¾ in. wide, is mounted on spools so that readings on many parts of a specimen can be made quickly. A ring-shaped clamping device stretches the film specimen slightly to smooth it and make its surface parallel to that of the mirror and to hold it at a distance of ⅜ in. from the mirror. The light source is energized by a constant-voltage power supply, controlled by a variable transformer. The photocell potential is measured on a Brown "Electronik" strip-chart recorder. The light beam, mirror and photocell are enclosed within flexible bellows to exclude stray light. A small blower cools the interior of the instrument.

Upon completion of our development work, we selected 45 deg. as a preferred angle for routine laboratory tests. As Figure 3 shows, most of the light reflected from the upper surface of the film (beam 2) does not strike the photocell. After the light rays pass through the film, they are reflected from the surface of the mirror back toward the film specimen. Again light rays are lost, owing to reflec-

Table I: Clarity of packaging films by various tests

Sample	*"See-through" visual test rank*	*Transmittance**	*A.S.T.M. Method D 1003 Haze†*	*Olin clarity meter $E/E_0 \times 100$*	*Overwrap visual test rank*
Cellophane B	2	56%	2.7%	84.5%	1
Polyethylene H	1	73%	4.6%	77.0%	2
Polyethylene I	3	11%	6.8%	67.3%	3
Polyethylene F	5	1.6%	18%	48.7%	4
Vinyl film J	6	0.19%	63%	19.8%	5
Special polyester sheet E, matte finish on one side	4	5.8%	68%	13.7%	6

*Ref. 3, Table V, Column 3.
†A. C. Webber, private communication.

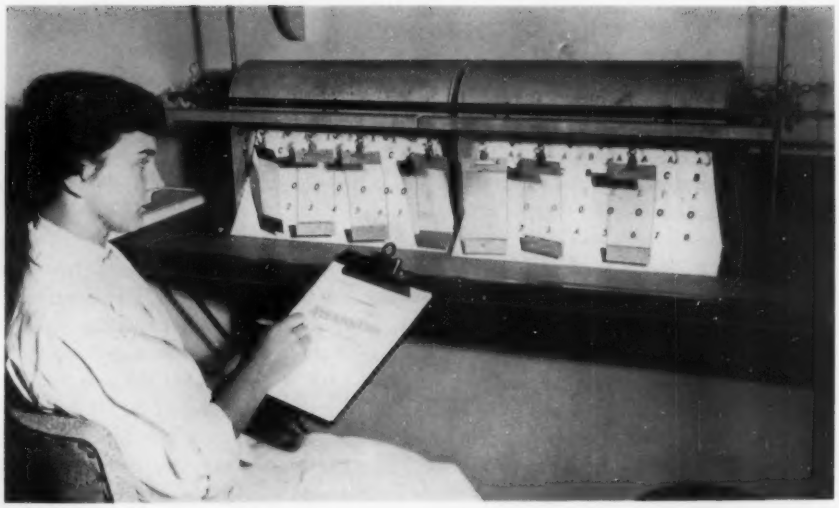


Figure 4. *Backlighted visual test method as previously used. This does not correspond to the packaging situation where light passes through the film, illuminates the contents and is then reflected back through the film to the viewer.*

tion from the second surface. This second beam of reflected light (beam 4) will also miss the photocell. Thus glossy reflections detract from total clarity in this instrument. Scattering of light by surface roughness or internal haze also subtracts some light from the main beam. Deviation of part of the main light beam by striations or gels will also cause part of the light to miss the photocell and color in the film will further reduce the intensity of the main beam. The ratio of photocell responses with and without a sample in the beam gives a clarity rating which complies with the principles stated in the preceding section of this report.

The use of a mirror to bend the light beam accomplishes two main purposes. First, light losses are intensified by having the light pass through the film twice at an angle. Second, the instrument is compact, measuring 25 in. wide, 10 in. high and 20 in. deep. It may be pointed out here that the placement of the film sample in the light beam in the Olin clarity meter can, in effect, be duplicated on any straight-line instrument by placing two specimens in the light beam, both at 45 deg. to the beam.

Comparison of results

Six films of widely different optical quality were evaluated by the Olin clarity meter. The films were taken from a set of 13 samples which were circulated to various laboratories by A.S.T.M. D-20, Subcommittee IV, Section D (3). The optical transmission and haze of the same films were measured in the laboratories of the Du Pont Polychemicals Dept. and the results were made available through the kindness of Dr. A. C. Webber. The test values, along with the rank established by a "see-through" test, involving a long sample-to-object distance, are given in the first four columns of Table I. It can be seen that the transmittance test ranked films the same as the "see-through" test and that ranks based on haze values and Olin clarity-meter values were the same, but did not match the "see-through" test rank.

Thus it appeared that the Olin instrument was sensitive to haze and the "see-through" test was not. The transmittance values allowed good prediction of "see-through" clarity and were not directly affected by haze. These results had to be compared with the generally accepted fact that freedom from haze is a desirable characteristic in a film for packaging. Consequently, we investigated an alternate visual test in which a direct overwrap was simulated.

Direct overwrap test

No data existed on the ratings of films in direct contact with packages; the six films of Table I were therefore tested in a simulated overwrap situation. The film specimens were placed over cards, all of which had the same colored print. A panel of observers was asked to arrange the cards in order of desirability of the films for overwrap use. Using this direct overwrap method, the majority of the panel members ranked the films in the order of decreasing clarity shown in the last column of Table I. Rank based on the overwrap visual test was the same as that set by the haze readings and the Olin meter.

Conclusion

The Olin clarity meter, based on the principle of using a mirror to cause a beam of light to pass twice through the film at an angle, has been found to be superior for evaluating films to be used for overwrap purposes as compared with conventional instruments with straight-line geometry in which the light passes through the film only once. On the other hand, the Olin clarity meter is not suitable for evaluating films for use in window glazing or where distant objects are to be viewed through the film. Since the packaging industry is interested in clarity evaluations of films only in reference to [*Continued on page 252*]

Medium-density PE in coatings

Test data indicate that intermediate polyethylenes give better performance at the same coating weight, or equivalent performance at lower weight, when compared with low-density resins.

By Charles S. Imig and John F. Morris†*

The successful use of intermediate-density polyethylene films for overwrapping has focused a great deal of attention on these materials. Possessing high gloss and transparency, plus good heat sealability and stiffness, these materials offer many possibilities in the field of packaging.

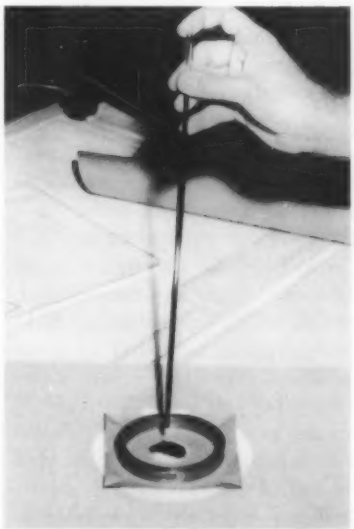
But, in looking at the opportunities for using intermediate-density resins in packaging, it is impossible to overlook their use in extrusion coating. While intermediate-density polyethylenes resemble low-density polyethylenes in extrusion behavior, they also approach the desirable physical properties of the higher-density materials. This is particularly true with respect to water-vapor transmission and greaseproofness. This balance of ease of extrusion with good physical properties combines to make them highly useful in extrusion coating. Coating weights may be decreased with subsequent cost savings without encountering insurmountable problems as far as processing is concerned.

Commercially, they can be used for coating any of the substrates presently coated with low-density polyethylenes. As stated above, they are similar in behavior to their lower-density cousins. In fact, several people have stated that they are *easier* to run than some low-density resins. Coating weights as low as 7 lbs./ream have been obtained in commercial operation. Generally the only changes necessary are to adjust the width of the extruded web to compensate for greater neck-in and in some instances to increase temperature settings slightly.

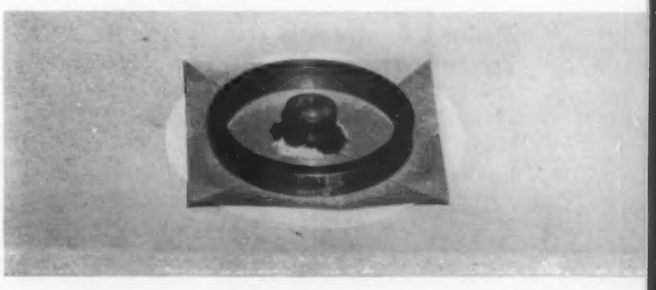
Extrusion behavior

To demonstrate the ease of processing intermediate-density polyethylenes, a series of tests was conducted on commercial-scale equipment. They utilized an 8-in. extruder equipped with a 72-in. die. Resins used were "Poly-Eth" 2007, "Poly-Eth" 2206, "Poly-Eth" 2605 and "Poly-Eth Hi-D" 2504. The first two of these resins are low-density extrusion-coating resins, employed as controls. Physical properties of the resins are summarized in Table I.

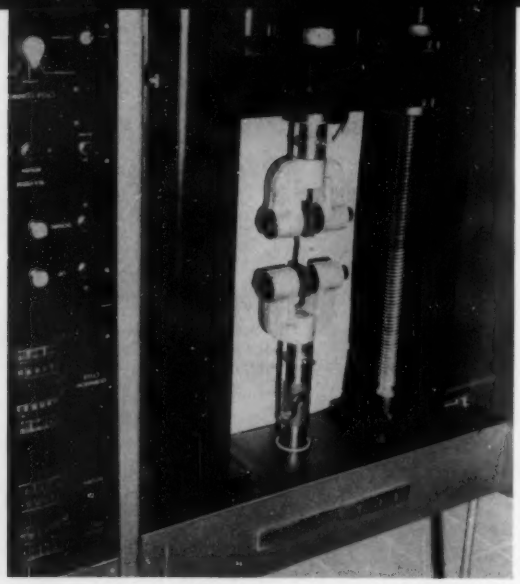
All of the resins could be extrusion coated onto 50-lb. kraft at coating weights of 7, 14 and 28 lbs. per ream without changing the temperature settings. The extruder temperature settings were 200, 450, 650 and 680 deg. F. with the adapter at 700 deg.



Greaseproof test. *Specimen creased in both directions is placed on filter paper with polyethylene side up. Sand in center of ring is saturated with mixture of Beacon grease 325, turpentine and Calco Red N-1700 dye, and a 50-gm. weight placed upon it. Time for dye to stain the filter paper is then recorded.*



* Formerly Senior Staff Member, Spencer Chemical Co.; now president, National Plastic Films, Inc., Ottawa, Kan.
† Technical Service Representative, Spencer Chemical Co., Kansas City, Mo.



Heat-seal strengths *were measured on an Instron tensile-testing machine and reported in p.s.i., as in Table II.*

and the die from 520 to 700 deg. F. from the center to the ends of the die. Water-inlet temperatures to the chill roll were 85, 100 and 130 deg. F. for the 7-, 14- and 28-lb. coating weights. No difficulties were encountered and the only change necessary was to adjust for the greater amount of neck-in displayed by the intermediate-density resins.

Properties of coated paper

Water-vapor transmission. Samples of the coated paper were returned to Spencer Chemical Co.'s Sales Service Laboratory for physical testing. The first of the tests established the water-vapor-transmission rates. It was carried out in a manner similar to that outlined in Military Specification MIL-B-3959. Samples were prepared for testing by creasing half of the specimens diagonally in both directions and leaving the other half in an "as-received" condition. The samples were then sealed in General Foods test dishes containing calcium chloride. Half of the creased and half of the uncreased specimens were placed in the dishes with the polyethylene side toward the calcium chloride desiccant and the other half placed with the polyethylene side away from the desiccant. After weighing, the dishes were placed in a 90%-humidity, 100-deg.-F. cabinet. The dishes were checked for weight gain each day for five days and the WVTR calculated.

The WVTR data are presented graphically in Figures 1 through 4. In every instance the WVTR improved (decreased) with the higher-density resins. Comparing Figure 1 with Figure 2, and Figure 3 with Figure 4, we see that the WVTR was always slightly higher when the polyethylene coating was away from the high-humidity side. These differences were more pronounced with lighter coating weights and lower densities. An observation of this type indicates the phenomenon known as wicking. Wicking is the penetration of paper fibres through the polyethylene, which then acts as a wick to transmit moisture. The two intermediate-density resins showed less tendency toward wicking in the tests than did the two lower-density materials.

Further, a comparison of Figure 1 with Figure 3, and Figure 2 with Figure 4, shows that creasing the specimens had no appreciable affect on the WVTR. None of the resin specimens that were tested displayed crease sensitivity.

Conclusions drawn from this laboratory data have been verified on a commercial scale by the Agricultural Chemicals Div. of Spencer Chemical Co. Exclusion of moisture from bags of "Mr. N" ammonium nitrate fertilizer is of utmost importance to keep the hygroscopic ammonium nitrate prills from forming a solid mass. Before the advent of intermediate-density polyethylenes, a 20-lb. coating of low-density polyethylene was required to do an adequate moisture-protection job. It was then discovered that by reducing the coating weight to 15 lbs. and using intermediate-density polyethylenes, it was possible to obtain comparable or even better moisture protection at a saving of 3%, or about $5.80 per thousand bags. This saving was realized in spite of the increased cost of the intermediate-density resin used. (The intermediate-density resin sold to the extruder for 42 cents a pound compared with 35 cents a pound for the low-density polyethylene resin that had been previously used.)

Bond strength. In further laboratory testing, the bond strength for each of the coated samples was measured with a Southwick-Perkins tester. This tester determines the amount of air pressure required to rupture a particular specimen. The bond strength was reported as the ratio of the burst pressure with the polyethylene side up to the burst pressure with the polyethylene side down. A perfect bond then gives a value of one, while less perfect bonds give values of less than one.

Specimens were tested in the "as-received" condition, after aging for 24 hrs. at 160 deg. F. and after soaking in water 48 hrs. at 73 deg. F., followed by conditioning 24 hrs. at 160 deg. F. Within the experimental accuracy of the determination, all

Table I: Identification of resins

Resin	*Density*	*Melt index*
"Poly-Eth" 2007	0.916	8
"Poly-Eth" 2206	0.917	4
"Poly-Eth" 2605	0.931	2
"Poly-Eth Hi-D" 2504	0.935	1

the specimens gave a bond-strength ratio of one. None of the values was affected by either of the conditioning procedures.

Heat-seal strength. The heat-seal strength was determined in the "as-received" condition and after aging. After optimum sealing conditions were established for each given material, a group of samples sealed under these conditions was placed, along with unsealed samples, in a circulating-air oven for one week at 158 deg. F. The sealed and unsealed specimens were then conditioned for an additional week at 158 deg. F. and 60% relative humidity. A group of sealed samples was retained without any conditioning. At the end of the two-week conditioning time, the unsealed specimens were sealed using the same dwell time, temperature and pressure as on those previously sealed. The heat-seal strength was then determined using a tensile-testing machine and reported in p.s.i.

The data are presented in Table II. Although there is considerable scatter in the results, several observations can be made. Coating weight seems to have a greater influence on seal strength than resin density when optimum sealing temperatures are

Water-vapor transmission rate

FIGURE 1

(SPECIMENS CREASED WITH POLYETHYLENE COATING EXPOSED IN DIRECTION OF HIGH HUMIDITY)

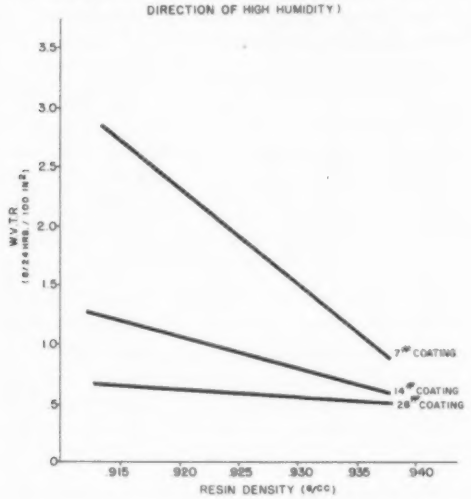


FIGURE 2

(SPECIMENS CREASED WITH POLYETHYLENE COATING EXPOSED IN DIRECTION OF LOW HUMIDITY)

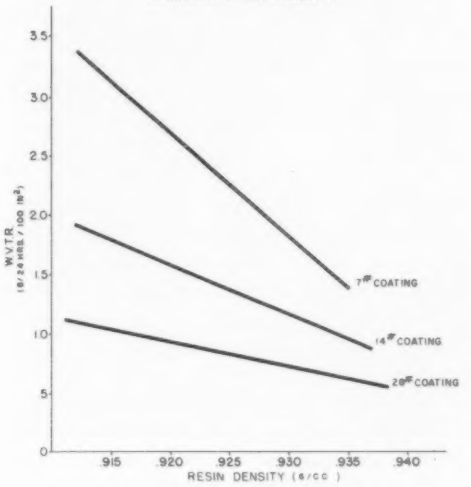


FIGURE 3

(SPECIMENS UNCREASED WITH POLYETHYLENE COATING IN DIRECTION OF HIGH HUMIDITY)

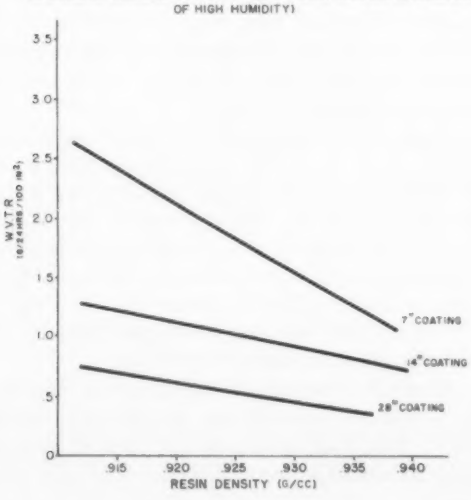
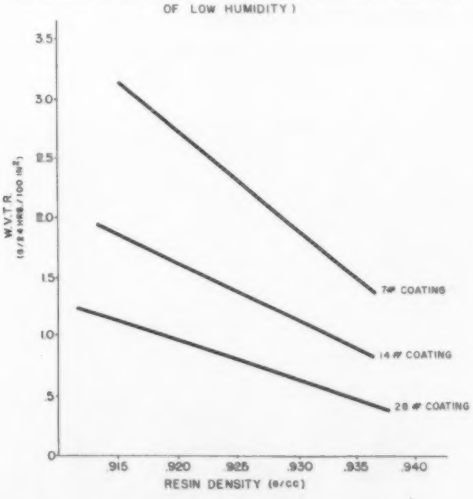


FIGURE 4

(SPECIMENS UNCREASED WITH POLYETHYLENE COATING IN DIRECTION OF LOW HUMIDITY)



Greaseproofness

FIGURE 5

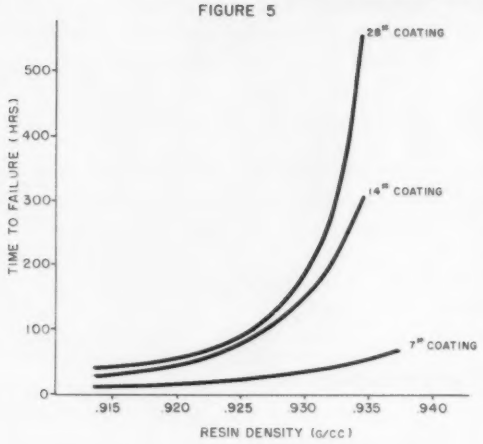
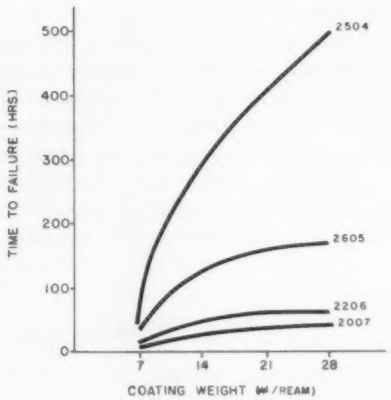


FIGURE 6



used for resin. Generally, the lower coating weights displayed slightly less strength at the seal. The conditioned specimens displayed lower values than the unconditioned. Aging the seal generally reduced the strength more than did the aging of the specimens prior to sealing.

Tear strength. Elmendorf tear strengths were determined in both the machine- and cross-machine directions, with the polyethylene side both toward and away from the knife. There were no significant differences in the values obtained, indicating that tear strength was not influenced by the resin used, the weight of coating or the position of the coating in respect to the knife.

Greaseproofness. The greaseproofness data were obtained in accordance with Military Specification MIL-B-3959, with the time to failure recorded. The specimens to be tested were creased in both directions and placed on a piece of filter paper with the polyethylene side up. Sand saturated with a mixture of Beacon grease 325, turpentine and Calco Oil Red N-1700 dye was placed at the center of the specimen followed by a 50-gm. weight on top of the sand. The time for the dye to stain the filter paper was recorded. The results of this test are shown in Figures 5 and 6.

Table II: Heat-seal strength

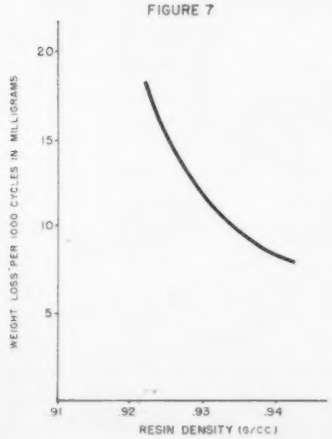
Coating weight	*"Poly-Eth" 2007*	*"Poly-Eth" 2206*	*"Poly-Eth" 2605*	*"Poly-Eth Hi-D" 2504*
	Sealed with no conditioning			
7#	1,490	1,400	1,300	1,430
14#	1,900	2,200	1,600	1,750
28#	1,960	2,800	1,650	1,580
	Sealed, then conditioned			
7#	760	800	900	700
14#	1,050	800	800	1,130
28#	1,550	1,600	1,200	740
	Conditioned, then sealed			
7#	1,340	1,150	1,200	1,120
14#	1,400	1,500	1,400	1,200
28#	1,440	1,700	1,100	1,430

Figure 5 shows the time to failure versus resin density at the three different coating weights. Figure 6 shows the time to failure versus coating weight for each of the four different resins. The tremendous improvement in greaseproofness for the higher-density resins is obvious. Based on these data, coating weights for grease resistance can be cut in half by replacing low-density polyethylene with intermediate-density polyethylene.

Blocking. Resistance to blocking was measured in accordance with Military Specification MIL-B-131C. Individual specimens are stacked with the polyethylene sides face to [*Continued on page 260*]

Abrasion resistance

FIGURE 7



Machinability of polypropylene film

Studies indicate that this new thermoplastic film, offering excellent use properties and superior stiffness for overwrapping, will perform well on machines. *By Ralph M. Winters**

The properties of polypropylene film suggest many applications which should assure it a healthy future in the packaging field (1, 2, 3)[1]. Polypropylene film has outstanding clarity and sparkle. It is strong and tough, with tensile strength significantly higher than that of polyethylene. It can be boiled and autoclaved. Its barrier properties are excellent, with grease and odor resistance very high; furthermore, its barrier properties are not affected by creasing, folding, age or storage conditions. Its cost is below that of 300-MS cellophane, although it is still above that of low-density and medium-density polyethylene.

The significant packaging properties of AviSun Corp.'s polypropylene film are listed in Table I. (Although the data presented in this article are based on pilot-plant film, our commercial film specifications have been determined using pilot-plant material, so that commercial material may be expected to perform in a like manner.)

Some of the potential uses for this new polypropylene film and sheet are: (1) high-quality, prestige packaging of textile products; (2) packaging of paper goods, such as stationery, napkins, bathroom tissue, picnic plates and cups; (3) skin and blister packaging of hardware, variety-store and supermarket sundries, and industrial parts; (4) overwrapping of bread and other bakery products; also bagging of buns and specialty rolls;[2] (5) overwrapping and bagging of candy products and quality produce[2] and (6) "boil-in-the-bag" food pouches.[2]

If polypropylene film is to succeed in any of these applications, the packager must be able to use it to create sales-making packages at a reasonable cost. This means that he must overwrap, bag or otherwise fabricate his package at high rates of speed with few reject packages. In short, polypropylene film must run on automatic machinery. We recognized this as one of the more important unknowns

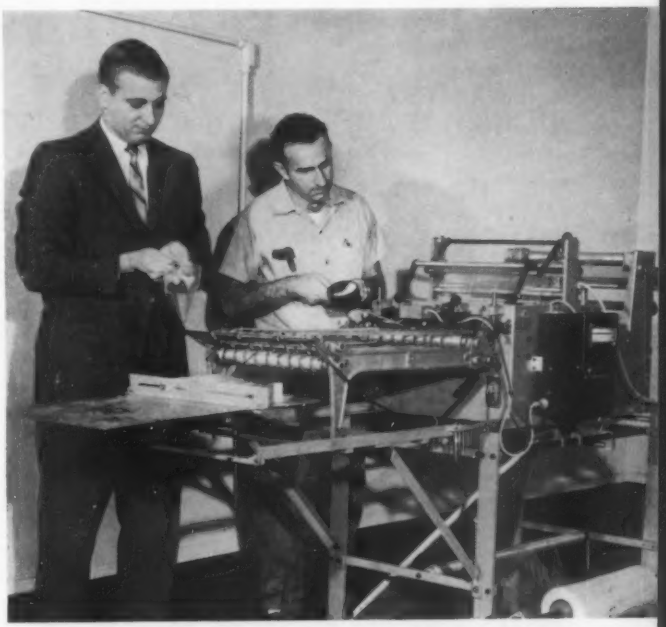


Figure 1. *Examining seal on polypropylene bag for strength and appearance. Mechanic checks temperature of the heated knife bar. This is a Polymaster (Conapac) side-weld machine.*

Figure 2. *Thermoformed package using 4-mil polypropylene is examined after removal from vacuum-forming machine used in test work.*

* Technical Service, Polypropylene Film, AviSun Corp., Marcus Hook, Pa.
[1]Numbers in parentheses identify References appended.
[2]When F&DA approval is obtained.

Table I: Comparative properties of polypropylene and polyethylene films

Properties	*AviSun polypropylene*	*Lower-density polyethylene* (up to 0.94 density)*	*Higher-density polyethylene* (0.94 density and up)*
Specific gravity	0.885-0.895	0.92	0.94 and up
Yield (theoretical) sq. in./lb./1 mil	30,900-31,300	30,000	29,000
Water-vapor transmission rate (gm./100 sq. in./24 hr./1 mil	0.45-1.10	1.2	0.3-0.6
Maximum use temperature (deg. F.)	250	180	230
Melting point (deg. F.)	330	——	——
Heat-seal range (deg. F.)	350-425	250-350	275-350
Tensile strength (av.) p.s.i.	4,600-7,600	1,350-2,500	3,000-10,000
Elastic modulus p.s.i.	90,000-120,000	——	——
Spencer impact—gm./cm./10^3	50	——	——
Elongation (av.) %	730-741	50-600	5-400
Tear strength (av.-Mod. Elmendorf)	82-426	150-350	15-300
O_2 transmission cc./100 sq. in./1 mil/atm./24 hrs.	180-260	High	Med. to high
CO_2 transmission cc./100 sq. in./1 mil./atm./24 hrs.	586-870	High	Med. to high
Odor transmission of moth crystals [paradichlorobenzene] through 1 mil/30 days	60% retained	0% retained	——
Oil resistance (leakage of Sun Motor Oil HC-5-W-20 through 1.5 mil polypropylene/6 months)	None	——	——
Clarity, gloss	Excellent optical properties	——	——
Haze value	1%	——	——
Dimensional stability	Excellent up to maximum use temperature	Excellent	Excellent
Printability	Equivalent to polyethylene	——	——
Resistance to acids	Excellent	Excellent	Excellent
Resistance to alkalies	Excellent	Excellent	Excellent
Resistance to organics	Variable	Excellent, but may swell slightly on long immersion	Excellent, but may swell on long immersion

* From Modern Packaging *Encyclopedia Issue for 1959.*

during the film's development and have been spending considerable time determining polypropylene film's utility on automatic machinery. This is a short report on results to date.

To our great pleasure, the machinery manufacturers have done an excellent job of producing equipment for handling thermoplastic films. Our method of evaluation has been to take film to the machine manufacturer and run it either on machines in his laboratory or on machines which have just been completed and are ready for customer delivery. Because testing of this nature is time consuming and limited in scope, we have also acquired for our packaging laboratory several pieces of basic machinery on which continuous studies of the film are being conducted.

Table II lists machinery on which polypropylene film has been tested. Our continuing program of machinery evaluation will ultimately include all manufacturers of packaging machines. We believe that these tests have re- [*Continued on page 258*]

Table II: Machines tested on polypropylene film

Machine	*Manufacturer*
Overwrapping	
Models 3-150 and 3-175—bread	American Machine & Foundry Co.
National BW-7—bread	Package Machinery Co.
FA-2—candy carton	Package Machinery Co.
Model 495 and 475S—envelopes and loose-leaf tablets	Battle Creek Packaging Machines, Inc.
2W8P Campbell wrapper—crackers	Hudson-Sharp Packaging Machinery, Div. Food Machinery & Chemical Corp.
Model 606	Scandia Packaging Machinery Co.
Bag	
Model P02R—gusseted	Roto Bag Machine Corp.
Polymaster—side weld	Conapac Corp.
Model 24-15—side weld	Simplex Packaging Machinery, Div. Food Machinery & Chemical Corp.
Simplex—gusseted	Simplex Packaging Machinery, Div. Food Machinery & Chemical Corp.
Form, fill & seal	
Transwrap TWB	Package Machinery Co.
Verti-Pak	Mercury Heat Sealing Equipment Co.
Thermoforming	
Production Vac 133—vacuum former	Plast-O-Craft Co., Inc.
Model RF-24-K—vacuum former	Packaging Industries Limited, Inc.

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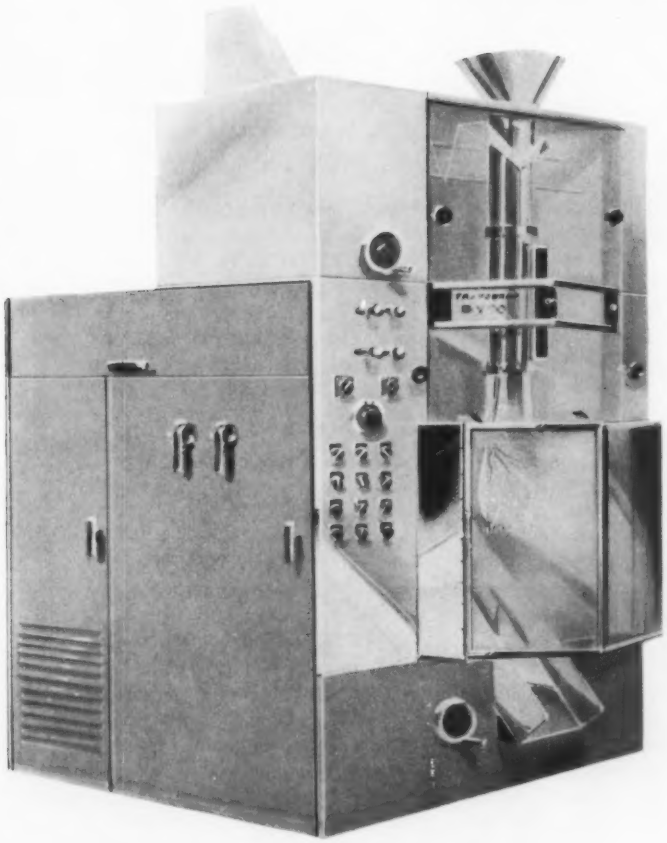

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Questions & Answers

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Prevention of leakers

Q: *We are market testing a new product in a polyethylene-paper pouch. The product is a liquid detergent with bleaching action. The package is a four-side-sealed flat pouch made on a continuous machine, using about 3 mils of resin on a white paper. All seals are resin to resin and the machine is a new type designed especially for making and filling this kind of package. The pouch holds about 2 oz. of product.*

During the start-up period, we had some leakers, etc., but the cause of this problem was corrected by mechanical adjustment of the machine and temperature control. Now there are almost no leakers at the time of production, but we find that a few of the packages leak after a few hours and sometimes leakers can develop as long as a week after their production.

Our problem is: How can we detect these potential leakers and, then, what can we do to prevent them from happening?

A: It is virtually impossible with today's knowledge and techniques to detect and eliminate potential leakers in this type of package.

The best answer is this: Strongly press the filled pouches as they come from the machine and reject any leakers. This technique should eliminate all poorly made or weak seals, but probably will have no effect in eliminating the long-term leakers.

The long-term leakers are caused by the low surface tension and strong chemical action of your product, plus certain faults or excessive stresses in the resin.

First, you should be sure that the polyethylene-coated paper has been made at the lowest possible temperatures. Ideally, the resin should adhere to the paper so tightly that it will tear the paper fibres when peeled. However, the resin should not be excessively driven into the paper. A 3-mil coating for this product and type of package should be sufficient on a smooth-surfaced paper. However, the surface of the resin must not be oxidized or degraded by use of excessive temperature and time in the extrusion coating operation.

There are a number of tests that will determine if the resin surface is oxidized. For your use, the resin surface must be free of oxidation to insure a strong seal that will not be perforated by long contact with your product. The maker of your extrusion-coated paper can supply you with material of acceptable quality if he understands your special requirements.

The next step is to be sure that no release compounds, oils or greases are used on rollers or can in any way contact the resin side of your material. Any foreign substance in the seal area can cause leakage of the product. It is also important that the filling be done in such a manner that there is no splashing or any contact or smearing of the product on the resin surfaces to be sealed.

It is also possible that your machine's heat sealers move or change pressure while the resin is fusing. Another factor to keep in mind is that the machine can distort the web while indexing the pouches from station to station. Any movement or any factor that causes stress in the heat-sealed resin can cause leakers.

This product has low surface tension and corrosive action and, with time, can cause stress cracking of poorly made or stressed seals.

An engineering study of each step and operation of the machine, plus laboratory evaluation of sample pouches, should locate the causes of the long-term leakers.

If the filled sample packages are held at elevated temperatures, perhaps up to 120 deg. F., and slight pressure, failure will occur much more quickly than it will at ambient temperatures.

When you find a leaker, remove the product carefully from the pouch and refill the pouch with a dark blue dyed water solution. This will help show how and where the leakage occurred.

Yours is a difficult problem to solve and it will require a carefully planned program of research and engineering to find the exact cause or causes of these leaks and to make changes that will stop them.

Plastic bottle unscramblers

Q: *Does anyone make an unscrambler for plastic bottles?*

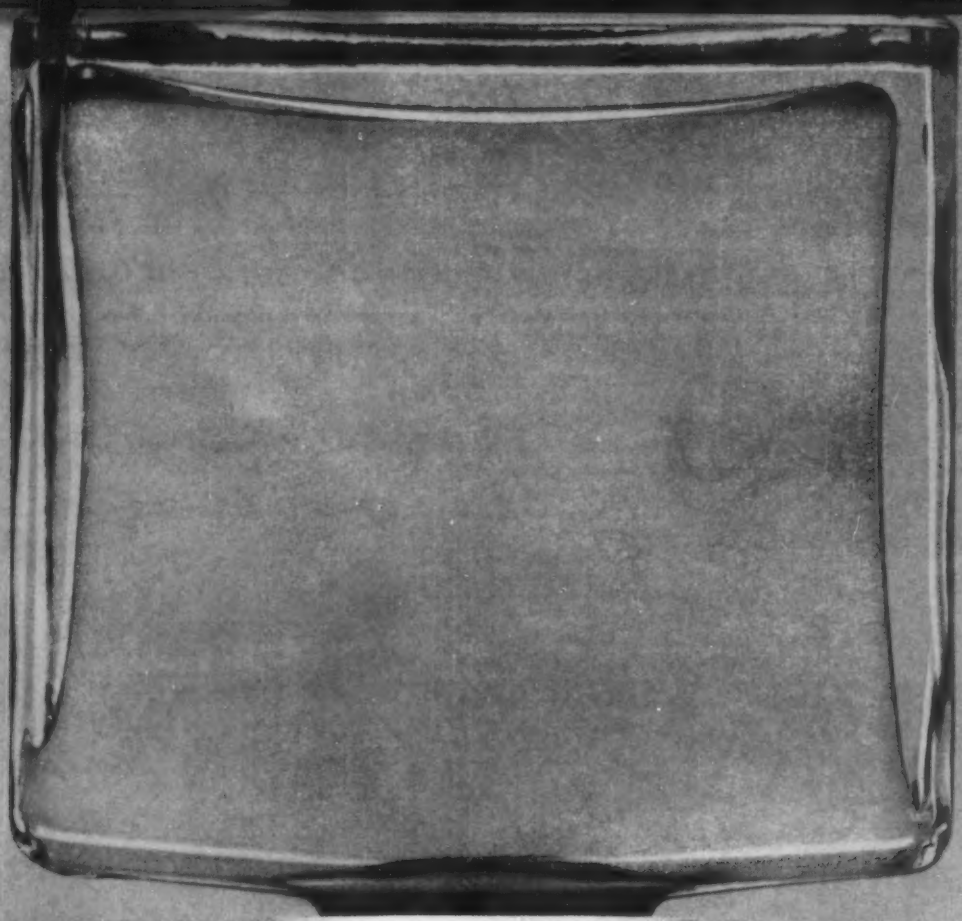
Some time ago we made an unsuccessful effort to obtain such equipment. We would like your advice on this matter before attempting a second time to locate a plastic-bottle unscrambler.

A: Within the last several months, three new types of unscramblers have been designed and built specifically for plastic bottles.

For very small bottles, there is a compact unit incorporating a vibrating feeder that can sort and up-end the plastic containers at the rate of about 150 per minute.

A larger machine that can handle either large or small bottles incorporates a dump hopper and elevator, coupled with a rotary feeder. The latter component is a mechanical device, designed originally for sorting caps, that has been modified to handle bottles at good operating speeds.

The third unit, used for small bottles in its first commercial application, also employs a dump hopper and elevator. However, it has reciprocating mechanical elements to up-end the bottles on a feed conveyor. This machine is rated at about 120 bottles per minute.



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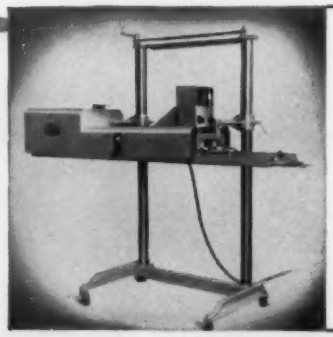

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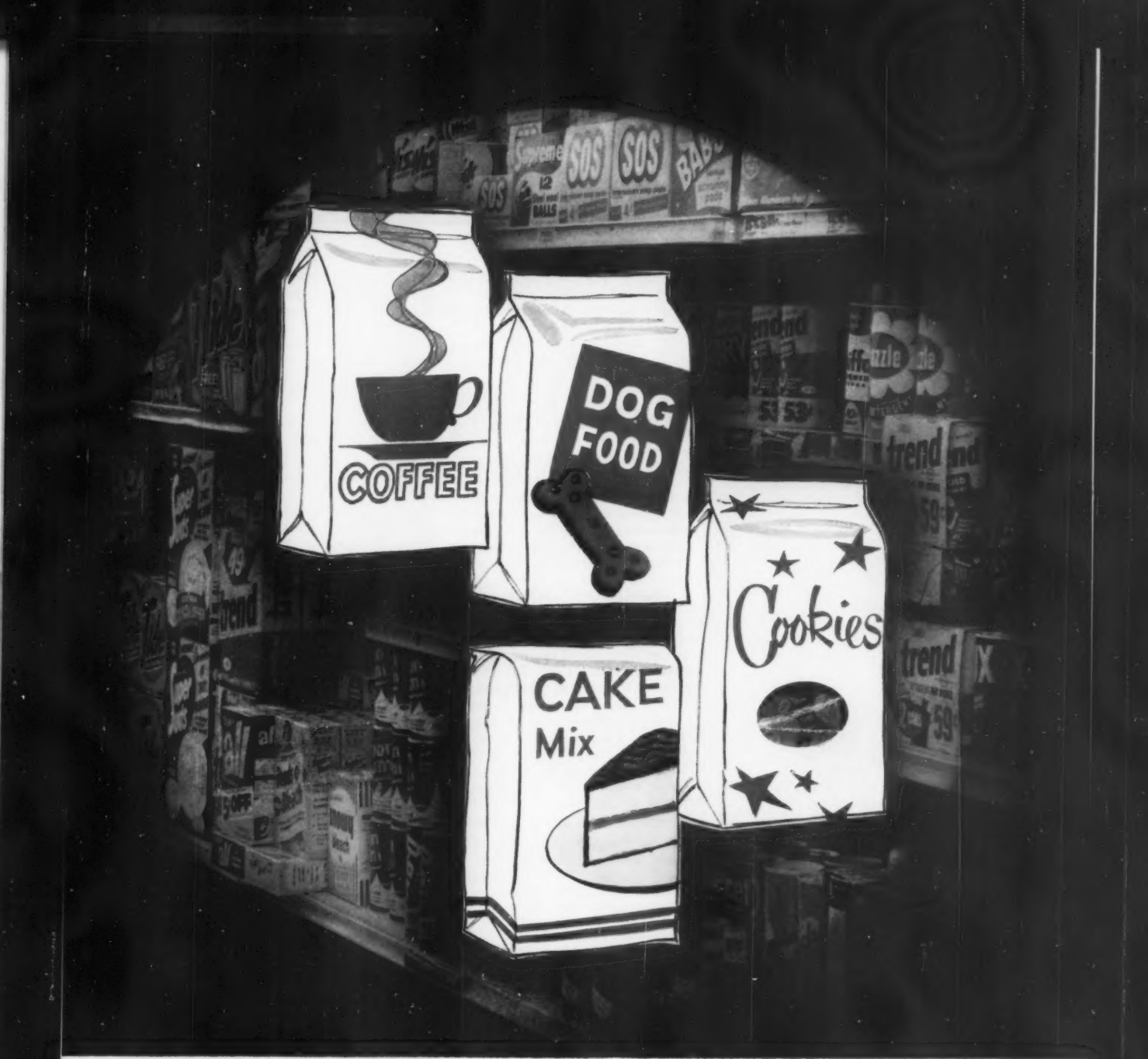

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Plants & People

Weyerhaeuser Co. is the new, shortened name of the former **Weyerhaeuser Timber Co.**, Tacoma, Wash. At the same time, the **Kieckhefer-Eddy Div.** name will be discontinued. In the interest of simplicity, the company says, the Kieckhefer-Eddy operations will be identified by separate division names. They are: Pulp & Paperboard Div., Milk Carton Div. and Paperboard Div. Folding-carton plants will, however, continue to operate under their present names as subsidiaries of Weyerhaeuser's Folding Carton Div. They include the **Ace Carton Corp.**, **Ace Folding Box Corp.**, **Gereke-Allen Carton Co.**, **The Rochester Folding Box Co.** and **Weyerhaeuser Southern Corp.**

Two major changes in the sales-management staff of **Milprint, Inc.**, have been made. **Blaine Baesler** is now national field sales mgr., a newly created post, with headquarters in Milprint's home office in Milwaukee. Succeeding Mr. Baesler as San Francisco district mgr. is **Ray Schmitz**, formerly asst. district mgr. A veteran of 14 years in packaging, Mr. Baesler has been on the company's West Coast sales force since 1948.

Baesler *Schmitz*

Riegel Paper Corp., New York, has named **Norval W. Postweiler** as mgr. of packaging-materials sales. He succeeds **Charles Schaehrer**, who was recently elected v.p. and sales mgr. of the specialty products div.

Installation of new production equipment for the manufacture of polyethylene film is reported by **Fabricon Products Div., Eagle-Picher Co.**, River Rouge, Mich. The film is being introduced under the name "Fab-Wrap." It is produced by chill-roll extrusion.

Orlich

Harold L. Orlich has been appointed sales mgr. for **Kartridg-Pak Machine Co.**, Chicago. He will operate from the company's manufacturing facilities in Davenport, Iowa. **Carter N. LeBeau** has been placed in charge of sales for Kartridg-Pak's aerosol div., **Mojonnier Associates.**

Richard B. Bunn has been promoted to v.p. and gen. mgr. of the **B. H. Bunn Co.**, Chicago. Mr. Bunn joined the company in 1946. Most recently, he served as v.p. and sales mgr. The company makes package-tying machinery.

Endean

H. J. Endean has been named mgr. of closure sales for **Aluminum Co. of America**, Pittsburgh. He succeeds **R. W. Dispennett**, now in charge of Alcoa's Pittsburgh district sales office. Mr. Endean, who joined the company in 1941, has been active for many years in the sale of aluminum caps and seals to industry.

Lawrence H. Zahn has been named director of a newly created purchasing and package-development div. by **Ciba Pharmaceutical Products**, Summit, N.J. Mgr. of the package-development and procurement section of the new div. is **Paul H. Schulz**, formerly asst. mgr. for pharmaceutical operations.

Diamond National Corp. is the new name for the consolidated operations of the **Diamond Gardner Corp.** and **The United States Printing & Lithograph Co.** following the recent merger of the two packaging-material-supply companies. **Robert G. Fairburn** is now chairman of Diamond National Corp. **William H. Walters** is pres. Mr. Fairburn was formerly pres. of Diamond and Mr. Walters held the post of chief exec. of U. S. Printing.

New pres. of **Demuth Glass Works**, Parkersburg, W. Va., is **Frank W. Britt.** New board chairman is **F. B. Hess**, pres. of**Brockway Glass Co.** Demuth is a sub. of Brockway.

Stone Container Corp., Chicago, has purchased the **Delmar Paper Box Co.**, of Cincinnati, manufacturer of set-up and folding boxes. Acquisition of Delmar will, according to the company, provide Stone Container with the basis for expansion of its folding-box sales in southern Ohio and bordering states. **Ira Pirman**, retiring pres. of Delmar, will continue to serve in a consulting capacity. The Delmar operation will continue under the management of **Ralph Pirman** as a div. of Stone Container.

Cotswold Fibres, Inc., Columbus, Ga., manufacturer of plastic films and fibres, has been acquired by the **Rap-In-Wax Paper Co.**, Minneapolis. The purchase, according to the company, is the second step of a program designed to give Rap-In-Wax a broad line of flexible packaging products and production facilities in all parts of the country.

Dr. Kenneth A. Arnold has been named director of research and development for **St. Regis Paper Co.**, New York. He will be responsible for programs in the fields of pulping, papermaking, coating, polymers, packaging materials, engineering physics, by-products and graphic science. As director of tech. services and control, **Dr. Robert W. Reed** will supervise quality control and technical services to manufacturing and sales on kraft papers, multiwall bags, packaging materials and printing papers.

Federal Paper Board Co., Bogota, N.J., has purchased **Sweeney Lithograph Co.**, Belleville, N.J.

A new dept. of product planning and development has been established within the Product Div. of **Kaiser Aluminum & Chemical Corp.**, Oakland, Calif. Under the supervision of **Robert R. Hopper,** the dept. will handle the planning and development of new and modified products, product applications and equipment. Mr. Hopper, who will continue as div. mgr. of marketing, will be assisted in his new assignment by **Roger W. Major, Edwin McBirney** and **Grant Facer.**

Hopper

Dr. Paul Moeller has joined **AviSun Corp.**, Philadelphia, as mgr. of special projects. He was formerly sales mgr. of **Celanese Plastics Corp. of America.** AviSun, a jointly owned affiliate of **American Viscose Corp.** and **Sun Oil Co.**, was formed earlier this year to manufacture and market polypropylene polymer film and fibre.

Cannella

L. G. Cannella has been appointed products sales mgr. of non-food cans for **Continental Can Co.**, New York. His former duties as district sales mgr. for metal containers in New York City have been assumed by **T. V. Carley.** Mr. Carley formerly held a comparable post in Continental Can's Boston office.

Michigan Carton Co., Battle Creek, has entered the egg-packaging field. The company has developed what it says is a competitively priced carton of exclusive structural design which will operate on most existing types of mechanical egg-room equipment. Named to head the company's egg-carton program is **Norman Seltzer,** formerly an associate in **Independent Carton Co.**

Harry E. Miles, v.p., has been assigned responsibility for all corrugated-shipping-container plants, excluding West Coast operations, of **Container Corp. of America**, Chicago. He will continue to supervise national coordination of sales policies in the Container Div. Mr. Miles' new assignment follows the recent resig-

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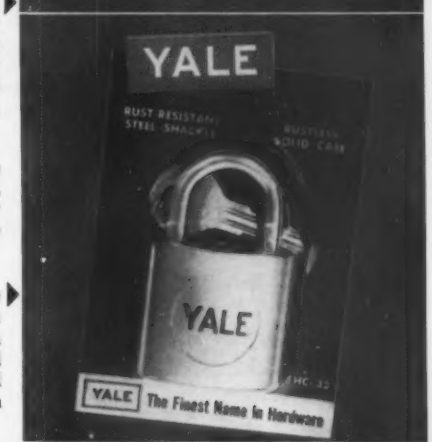
GEM'S new push button razor stands upright—fully visible from all sides—a dramatic SHOWPLAX package with crystal clear dome and flocked plastic base.

JOHNSON AND JOHNSON packs its dental floss quickly, economically in a SNAPLAX—Plaxall's double undercut blister which snaps onto a diecut card—no sealing, no adhesives, no staples, no double cards.

GENERAL ELECTRIC'S portable food mixer is vividly displayed, yet fully protected, in beautifully contoured cellulose acetate COVERPLAX.



YALE AND TOWNE'S line of fine padlocks is now packaged in Plaxall's BLISTERPLAX—a butyrate blister pressure-formed for unusual uniformity and strength, and heat sealed onto a display card.

STERLING DRUG, d-CON Division, distributes millions of formed TRAYPLAX as rodent bait stations—trays are pressure-formed, trimmed and stacked automatically with the precision and accuracy of metal stamping.

WESTINGHOUSE selected Plaxall's versatile SLIDEPLAX to display and dispense their automotive bulbs—achieving visibility, accessibility and protection—at low cost.

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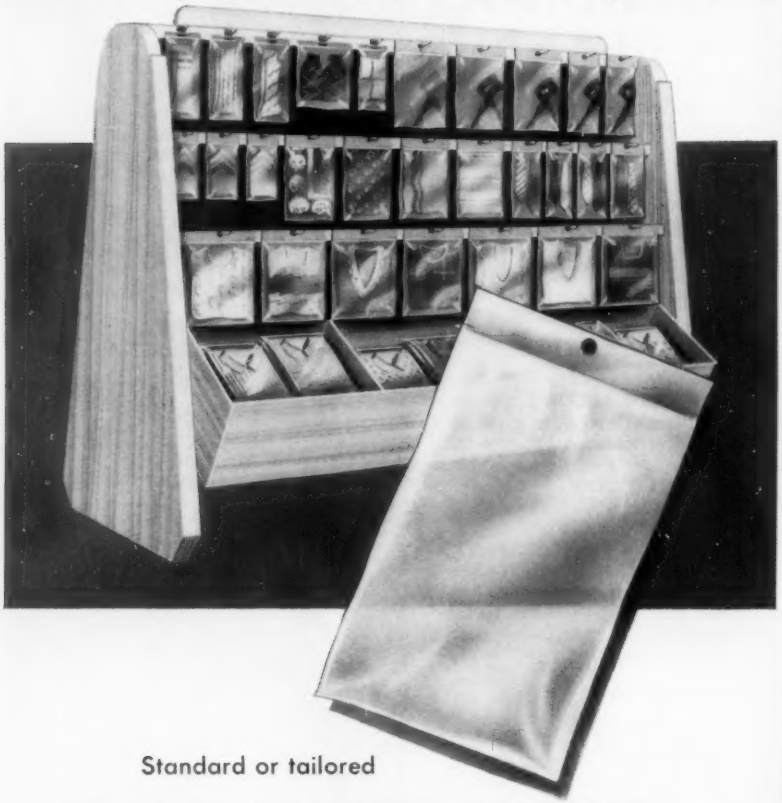

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Plants & People [*Cont'd*]

nation of **Donald H. Brewer**, senior v.p. in charge of the Container Div. **Leo H. Schoenhofen**, senior v.p. of the company's folding carton and boxboard divs., now has over-all responsibility for the Container Div. **David R. Riggs**, v.p. of Container Corp.'s Eastern Container Div., has resigned.

Champness

Kenneth T. Champness has been promoted to advtg. director for **Mead Packaging, Inc., Atlanta Paper Co. Div.**, Atlanta. He was formerly sales-prom. mgr., a post he had held since joining Mead last year. In his new capacity, Mr. Champness will direct company advertising, sales promotion, public relations and merchandising programs.

Dr. Frank E. French, Jr., has been appointed to the newly created post of mgr. of new product and market development in the "Freon" Products Div. of **E. I. du Pont de Nemours & Co.**, Wilmington, Del.

Elmer D. Abramson has been appointed exec. v.p. of **Central States Paper & Bag Co.**, St. Louis.

James W. Flynn has been appointed sales mgr. of **Celanese Plastics Co., div. Celanese Corp. of America**, New York. He succeeds **Dr. Paul Moeller**, now with **AviSun Corp.** Mr. Flynn has been with Celanese since 1944. His former duties as mgr. of market development for the company have been assumed by **Dr. Howard L. Pilat.**

Swift

Gordon S. Swift has joined **Crompton & Knowles Packaging Corp.**, Holyoke, Mass., as sales coordinator, in charge of the company's newly created dept. of sales coordination. Crompton & Knowles Packaging, a sub. of **Crompton & Knowles Corp.** of Worcester, Mass., manufactures a line of automatic packaging machinery.

Sun Chemical Corp., New York, has purchased **Pennsylvania Color & Chemical Co.**, Doylestown, Pa. Pennsylvania Color is a manufacturer of pigments used in the manufacture of inks for color printing, industrial coatings, plastics and other applications. It will be operated as a Sun division.

William Race has resigned as chairman of the board and director of the **Sutherland Paper Co.**, Kalamazoo, Mich.

A six-man planning staff for the converting products group of **The Champion Paper & Fibre Co.**, Hamilton, O., has been formed. **Charles G. Ellington** has been appointed director of the group, which includes **Robert A.**

Good Cookie Packaging...makes triple-play with Rhinelander Papers!

This photograph displays the versatile teamwork of Rhinelander Glassine and Greaseproof papers in providing excellent three-way package protection for chocolate peppermint cookies. ① Corrugated Glassine is laminated to chipboard. This gives added strength to the overall package, prevents staining, and cushions its contents against damage. ② The inner dividers and trays of corrugated Greaseproof provide support against shock and staining. ③ Fluted cookie cups of rich red Glassine add a pleasing note of color and give greaseproof and shock protection.

These economical Rhinelander papers perform well on modern laminating and packaging equipment. Write for samples and complete information for the packaging of your product.

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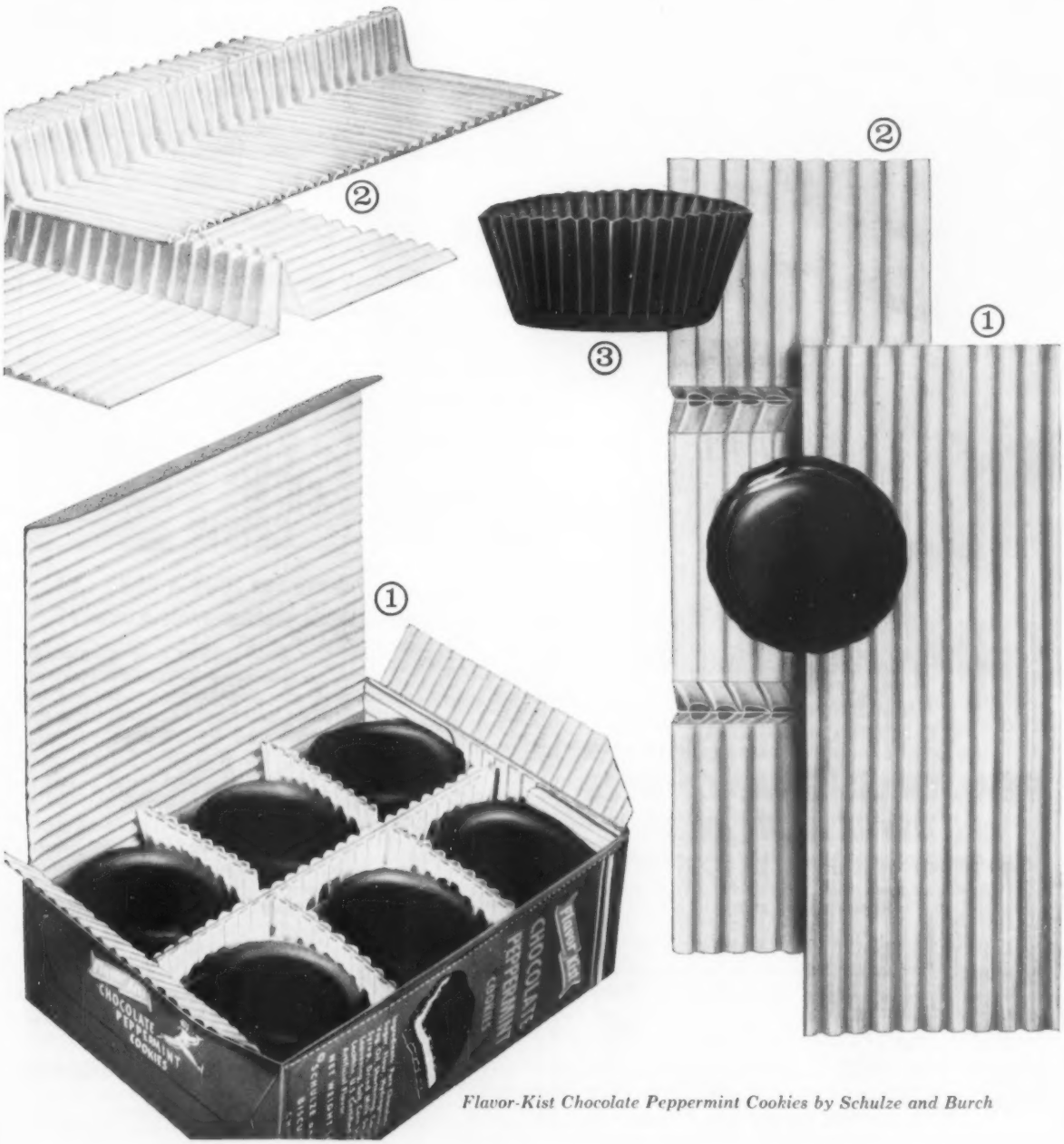

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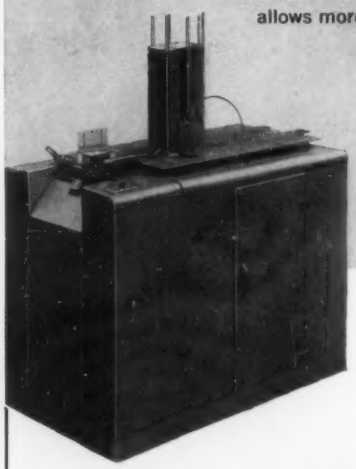

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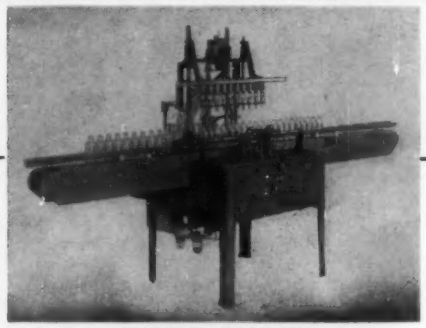

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Plants & People [*Cont'd*]

Koenig, John M. Stevenson, William A. Pogue, Harvey H. Haines and **Robert D. Keppler.** The planning staff will undertake studies and projects designed to effect current and long-range improvements in converting products.

Atlantic Gummed Paper Corp., Brooklyn, has established two new divisions.

Frankel MacLaurin

They are the Polyethylene Coated Products Div. and the Gummed Printing Paper Div. The former div., which will be headed up by **Marvin Frankel,** will specialize in polyethylene coating and polyethylene lamination of paper, film, foil and textiles. The latter div. will be headed by **John M. MacLaurin.**

Donald K. Ballman and **C. B. Branch** both have been elected to the post of v.p. by **The Dow Chemical Co.,** Midland, Mich. Mr. Ballman is director of sales; Mr. Branch is mgr. of overseas operations and pres. of **Dow Chemical International.**

Knight

Ralph M. Knight has been appointed a v.p. of **U. S. Industrial Chemicals Co.,** div. **National Distillers & Chemical Corp.,** New York. In his new post, Mr. Knight will intensify the company's long-range polyolefin development program. He will continue to direct the Polymer Service Laboratory and to coordinate its work with other U.S.I. plastics activities.

Armstrong Cork International is a new sub. corporation formed by **Armstrong Cork Co.,** Lancaster, Pa. To be headquartered in Geneva, Switz., Armstrong International will be responsible for sales of the parent company's products in Europe (except in countries where Armstrong has plants). **D. E. Sanderson** has been named pres., gen. mgr. and a director of the new firm. **Stewart C. Dalrymple** is gen. sales mgr.

The Film Dept. of **E. I. du Pont de Nemours & Co.,** Wilmington, Del., reports that it is modernizing manufacturing facilities for "Cel-O-Seal" cellulose bands and also is forming an integrated division for handling production and marketing of the product. **M. V. Noble** has been named mgr. of the division.

Du Pont also is building new laboratory and office facilities for its "Mylar" polyester-film technical section adjoining the film plant in Circleville, O.

Harold M. Belmuth has joined **Cellu-Craft Products Corp.,** New Hyde Park, N. Y., as gen. sales mgr. He was formerly gen. sales mgr. of the Chester

Constant and exact temperature control is easy with the **BROWN** closed system unit

Brown Machine Company, continuing to serve the plastics industry with dependable modern equipment, proudly introduces the new TC-2 Control Unit. The Brown TC-2 is an improved recirculating closed-system temperature control unit. Its function is to maintain a stable input water temperature for all types of Vacuum Forming Molds and Sheet Polishing Rolls within ±1.5°F. Simple to operate, the TC-2 assures constant precise control at all times; and is extremely economical to use because of its efficient recirculation system. If you want accurate temperature control (to ±1.5°F.), with low operating and maintenance costs, let the new TC-2 unit do the job for you.

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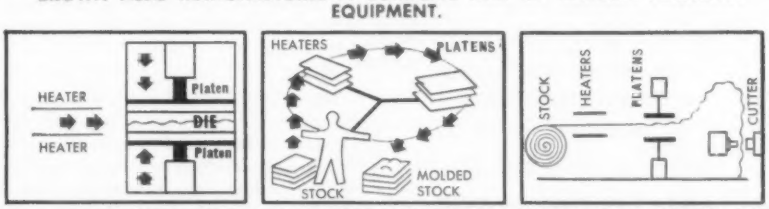

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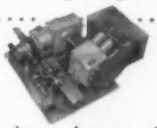
Model CW transfer wheel type is small, compact, adaptable to many parent machines processing at rates approximating 100 units per minute. Operates at any angle — even upside down. Applies various adhesive patterns to passing units.

STRAIGHT LINE GLUING



The Model BW is a heavy duty transfer wheel type with capacity to apply nearly 100,000 feet of average width seam per hour. Can apply continuous or broken line patterns to individually passing items or blanks.

CARTON PRODUCTION

The Model AW wheel type applicator provides intermediate adhesive volumes. Applies up to a quarter pound of hard working, sure sticking hot melt adhesive per minute. Operates inverted or on vertical surfaces.

BAG MAKING

The Model AN for continuous seams applies up to 35,000 feet of ¼ inch seam per hour. With different nozzles a variety of seam combinations and locations can be produced.

FABRIC BONDING

The Model BN unit more than doubles adhesive capacity of Model AN. Good for rough materials, fabrics, burlap, as well as heavy papers.

WAX PAPER OR FOIL STICKING

Small bags, business forms, or continuous tapes are a specialty of the CN unit.

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Plants & People [*Cont'd*]

Packaging Div. of **St. Regis Paper Co.** During his 12 years with St. Regis, Mr. Belmuth was involved in the development and sales of polyethylene films and protective barrier materials.

The Lakso Co., Inc., of Fitchburg, Mass., recently completed negotiations with **Packaging Machinery (Peters), Ltd.**, England, for the manufacture and sale of Lakso packaging equipment in England and Europe. The contract gives Packaging Machinery the right to build and sell Lakso tablet and capsule counting and filling machines to European pharmaceutical houses.

After 30 years' association with **A. Kimball Co.**, Brooklyn, **Leo J. Waters** has retired as pres. of the company. Mr. Waters is well-known in the tag, ticket and label field.

Good

Continental Plastics, Inc., Oklahoma City, Okla., has appointed **Charles R. Good** to the position of v.p. in charge of marketing. In his new post, Mr. Good will supervise marketing research and distribution for the company, which molds both custom and proprietary plastics.

Packaging Services, Inc., a newly formed company, has opened offices and manufacturing facilities in Wilmington, Del. The new firm is equipped to handle any type of flexible film packaging for such commodities as liquids, powders and tablets for the chemical, pharmaceutical and cosmetics industries, as well as for various foods and hardware. **A. J. Gordon**, pres., and **A. Jacobs** head the new organization.

The Borden Chemical Co., div. The Borden Co., New York, has named **Thomas P. Fitzpatrick** to the post of Midwest district sales mgr. for the coatings and adhesives dept.

Eugene E. Giard, who has been associated with **Hazen Paper Co.**, Holyoke, Mass., since 1936, has retired after more than 40 years in the paper business.

The Lord Baltimore Press of California, San Mateo, Calif., a div. of **The Lord Baltimore Press**, has appointed **W. R. Scott** as mgr. of gen. packaging sales and **Don Alvarez** as mgr. of frozen-food packaging sales. Mr. Scott was formerly on the sales staff of **Fibreboard Paper Products Corp.** and of **Marathon.**

Veeder-Root, Inc., Hartford, manufacturer of computers and counting instruments used in packaging-line applications, has made several executive promotions. **Arthur E. Kallinich** becomes v.p. in charge of new products and new businesses. **C. Charles Lombardi** is promoted to sales mgr. for catalog sales. **Theodore Nelson** has been named Western sales mgr. **Frank J. Swords** succeeds him as Eastern sales mgr. **Roger Conant** moves up to Southern district sales mgr. **George L. Logan** becomes mgr. of market research and advertising.

Tarpey & Dillen, Inc., 414 W. Main St., Louisville 2, Ky., a newly established industrial design firm, is offering services in the fields of package, product and graphic design. Partner **Thomas A. Tarpey** was formerly chief designer at **Reynolds Metals Co.** and previously was associated with **General Electric** as supervisor of package design. He is a member of the **Industrial Designers Institute.** Mr. Dillen, the other partner, was senior designer at Reynolds Metals for the past eight years.

Tarpey

Lanzit Corrugated Box Co., Chicago, has been liquidated by court order. Citing "long-standing dissension among the company's directors," the court based its ruling on a statute which says a corporation may be liquidated if a deadlock has caused or threatens irreparable injury. The decision will be appealed.

The Arabol Mfg. Co., New York, is constructing a plant in the Cobb-Marietta Industrial Park, a new industrial area on U. S. Highway 41 in Georgia. Operations are expected to commence this month. **Silas I. Wooten** and **William H. Thompson** were appointed mgr. and sales mgr., respectively, for the Southeastern area.

The Dow Chemical Co., Midland, Mich., will build facilities for the production of polypropylene at Torrance, Calif., on a site adjacent to other Dow production units. The decision to locate the plant at Torrance was due both to market considerations as well as to the fact that raw materials were readily available, says the company.

B. D. Bloser has been appointed gen. mgr. of production engineering at **Continental Can Co.**, New York. **F. J. Hoffman**, formerly mgr. of cannery equipment service in the firm's Eastern Metal Div., succeeds Mr. Bloser as gen. mgr. of cannery equipment service. **Gordon Alexander** has been promoted from district supervisor in Syracuse to take over Mr. Hoffman's former duties.

Bloser *Hoffman*

St. Regis Paper Co., New York, will operate its recently acquired **Chemical Packaging Corp.** as a sub. specializing in the sale of multiwall bags and packaging equipment to the fertilizer industry east of the Mississippi River. **Richard Heard** will continue as pres. of Chemical Packaging.

A recovery-boiler explosion at the plant of **East Texas Pulp & Paper Co.**, Sils-

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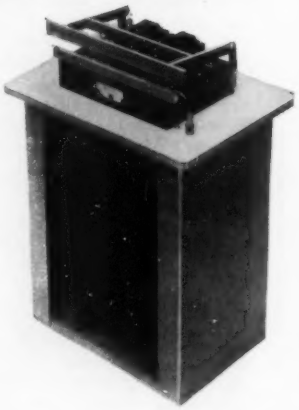

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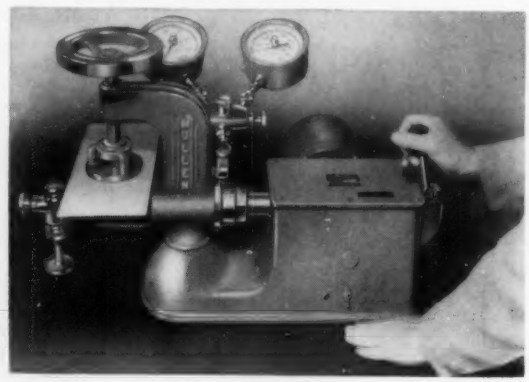

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Plants & People [*Cont'd*]

bee, Tex., killed five employees and injured 11 others. The accident, which occured on Sept. 14, also caused major damage to the company's No. 2 recovery boiler. However, the No. 1 boiler was not damaged, and normal production has been resumed.

Elmer Plastic Fabrics Corp. is a new company specializing in the sale of vinyl film and sheeting, vinyl and polyethylene extrusions, and similar materials. **Fred Elmer** is pres. of the company, which is located at 161-24 Northern Blvd., Flushing 58, N.Y.

Hunnewell

William E. Hunnewell has joined the staff of **Bagcraft Corp. of America**, Chicago. As sales coordinator, he will be responsible for integration of the company's sales efforts throughout the country. Mr. Hunnewell was formerly associated with **Brown Paper Goods** and has been active for many years in sales of paper-converting lines.

A new polyethylene-producing plant has been opened by **Union Carbide Plastics Co.**, N.Y. The new facility brings the company's annual capacity for the production of low-density polyethylene to 400 million lbs. The new 80-million-lb.-per-year unit is located at Whiting, Ind.

Continental Can Co., New York, will build a 250,000-sq.-ft. can plant and warehouse in Shoreham, Mich. The facility will be equipped to produce 250 million cans per year, with room for expansion to double this capacity.

Faustel, Inc., Butler, Wis., is the new name of the former **Faustel Engineering, Inc.** The firm makes machinery for the paper converting industry.

The Borden Chemical Co., New York, has completed construction of a half-million dollar plant at Illiopolis, Ill. Production at the new Coatings and Adhesives Dept. facility started last month.

Promotions

Russell S. Aagaard, Jr.: to Pacific regional sales mgr. of folding cartons, **Continental Can Co.**, New York.

Henry Kittell: to asst. sales mgr., **Cochran Continental Container Corp.**, sub. **Anaconda Aluminum Co.**, Louisville.

William S. Goodfellow: to v.p. of marketing, Container Div., **Rheem Mfg. Co.**, Chicago. **O. X. Pitney**: to v.p. of operations.

Edward F. Finch: to mgr., carton & container div. plant, Saratoga Springs, N. Y., **General Foods Corp.**, White Plains, N. Y.

Walter J. Kilmer: to mgr., Detroit sales div., U. S. **Industrial Chemicals Co.**,

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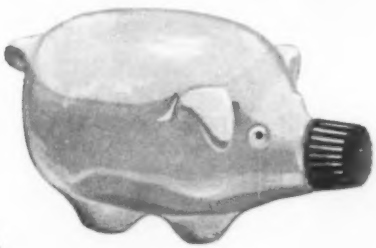

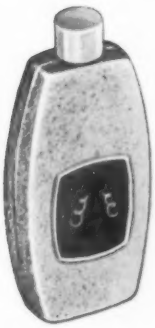

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Plants & People [*Cont'd*]

div. National Distillers & Chemical Corp., New York. He succeeds **Fred M. Henley**, who is retiring.

V. J. Verhunce: to Eastern area mgr. of manufacture, Canco Div., **American Can Co.**, New York. **R. J. Odione:** to asst. Eastern area mgr.

T. W. Froom: to sales mgr., food-packaging dept., **Sutherland Paper Co.**, Kalamazoo, Mich. He succeeds **L. J. Moore**, resigned.

Richard Janes: to treas., **Harley Earl Associates**, industrial design company of Warren, Mich.

Appointments

R. L. Hawkins: to director of technical service for polyvinyl alcohol, Technical Service Laboratories, **Colton Chemical Co.**, Cleveland. He was formerly with **Southern Adhesives Corp.**

Stuart K. Wood: to asst. to the pres., **Edgar Steiner & Co.**, New York, research engineer. Formerly head of his own business, Mr. Wood also was director of packaging for Avon Products.

Frank A. Ross: from the **Cottrell Co.** to mgr., research and development, **New Era Mfg. Co.**, Hawthorne, N. J. The company makes multi-process presses.

Arthur A. Coffin: from **Titanium Pigment Corp.** to consultant, Polyco-Monomer Dept., **Borden Chemical Co.**, New York. Mr. Coffin is a specialist in paper chemistry.

Will E. Beaumont: from **Container Corp. of America** to personal asst. to Howard Blonder, **Howard Blonder & Associates**, Downey, Calif. The design firm is now located at 8339 E. Third St., Downey, Calif.

Obituaries

Edwin Stein, board chairman of **Stein Hall & Co.**, New York, died suddenly on Aug. 31 in New York. He was 64 years old. Mr. Stein had been with the company for 43 years. He was elected pres. and director in 1944 and became chairman in 1948. Mr. Stein was an important figure in the development of the company's services to the textile, paper and adhesives industries.

Dr. Bernard E. Proctor, head of the Dept. of Food Technology at Massachusetts Institute of Technology, died Sept. 24. He was 58 years old. At the time of his death, Dr. Proctor was conducting a program of research on sterilization of food by atomic radiation. During World War 2, he served the Government as chief consultant on food to the Secretary of War and as director of subsistence and packing research and development for the Quartermaster General. Dr. Proctor was the author and co-author of many technical articles in MODERN PACKAGING.

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Equipment & Materials

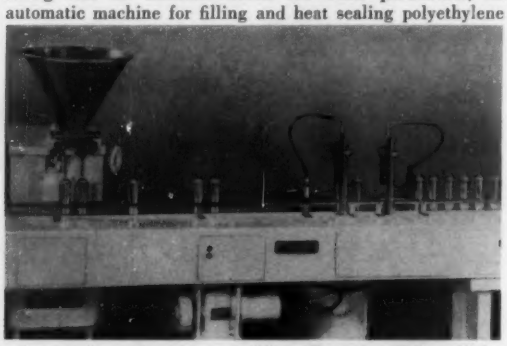
[*Continued from page 68*]
quart in size. According to the supplier, the automatic straight-line filler affords versatility to packagers filling a variety of container sizes. Change-over from one-size container to another is reported to take only a few minutes. All nozzles are interchangeable. All automatic functions of the filler are pneumatically operated and electrically controlled. This, says, the supplier, assures a smooth, continuous flow of uniformly filled containers. *Packer Machinery Corp., 109 14th St., Brooklyn 15.*

Two new film-packaging units

Two new machines will be demonstrated at the PMMI Show this month by Hayssen. The RT machine runs polyethylene for packaging textiles, cards, pencils and other products. Different items can be run interchangeably on the machine, says the firm. The second new unit is a Model G Compak with an automatic top-labeling attachment. It will be shown, with a net-weigh scale, packaging twist-wrap hard candies and automatically applying a top label to the package after it is formed, filled and sealed. Details are availabe from *Hayssen Mfg. Co., Sheboygan, Wis.*

New line of filling equipment

New equipment to be demonstrated by Arthur Colton at the PMMI Show this month includes: a straight-line aerosol-filling line for medium-volume automatic production, an automatic machine for filling and heat sealing polyethylene



tubes, and a rotary unscrambler. The new Colton-Alpha aerosol-filling line (shown) will handle up to 30 containers per minute. Included are a variable-speed drive; a double-ported, two-nozzle filler; a single-head crimper, and a single-head pressure filler that reportedly enables container pressurizing without refrigeration. Liquids and light viscous product can be filled. The supplier's automatic polyethylene-tube filler and heat sealer actually is a standard Model 175 metal-tube filler, fitted with a conversion unit for handling the plastic package. The rotary unscrambler accommodates a variety of containers. It operates at a speed that matches that of the filling line, says the supplier. *The Arthur Colton Co., 3400 E. Lafayette Ave., Detroit 7.*

Carton-erecting and closing machines

A feature of St. Regis Paper's exhibit at the PMMI Show this month will be its new line of Sta-Lox carton-erecting and closing machines. The equipment, says the supplier, is part of an integrated packaging system designed to provide economical, high-speed packaging for manufacturers of automotive parts, soft goods, frozen foods and other products. The machines can set up and close from 90 to 250 cartons per minute, the company reports. Sta-Lox cartons are lightweight, bleached-board boxes with patented corner-locking devices. *St. Regis Paper Co., 150 E. 42 St., New York 17.*

Lightweight vibration inducer

A lightweight vibration inducer designed for use in packaging-line operations is available from Martin Engineering. Designated the BD-10, it will be introduced at the PMMI Show this month. The supplier points out that its new unit weighs only 4½ oz., compared with 11 oz. for its predecessor. It also is fitted with a replaceable jet, for economy in long-term use. Vibration is generated by a rolling ball driven in an orbit on replaceable raceways of hardened high-alloy steel. According to the manufacturer, it will not be harmed by high ambient temperatures. The unit can be supplied in a natural aluminum finish, for use where paint or enamel finishes could be a source of contamination for food or drug products. *Martin Engineering Co., Neponset, Ill.*

Units for single-dose cartridges

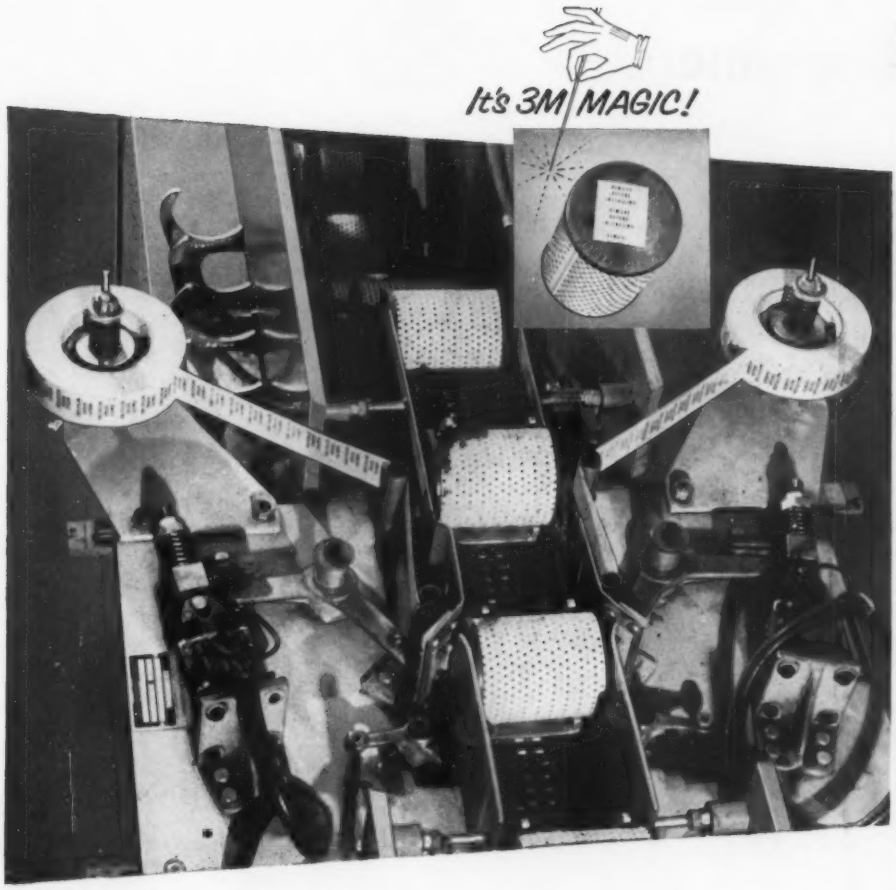
Two new machines—designed to be used together in the manufacture of disposable single-dosage glass cartridges—are offered by Ampoule Machine. Both will be demonstrated at the PMMI Show this month. The supplier's Shields Combination Machine performs 12 operations on the cartridges, preparatory to filling and capping, at a reported rate of 120 per minute. On the machine, the cartridges are thoroughly cleaned and washed, then fed into an accumulator. Then they are loaded into magazines which go to a sterilizer and on to the second machine, the Shields Filler Capper. This unit, operating at a rated speed of 60 per minute, fills the cartridges and seals them with aluminum caps. Tools in the machine's spinning head make contact with the metal above the shoulder of the glass cartridge and form the metal around it, following the contour of the shoulder. This procedure, the company notes, assures a positive seal. Filling valves can be removed, sterilized and replaced without disturbing the original setting. *Ampoule Machine Co., 38-09 24th St., Long Island City 1, N.Y.*

Polyethylene-bag maker

Heinrich Equipment says its new Poly-Matador polyethylene-bag-making machine not only supports speeds up to 200 bags per minute, but also delivers the finished bags in counted stacks. The new unit will be shown in operation at the PMMI Show this month. Also on display will be a new line of high-speed flexographic printing presses. Among the outstanding features of these units, says the supplier, are: electronic constant web-tension control, automatic web splicing, remote register controls, automatic web guides and web scanning. *Heinrich Equipment Corp., 111 Eighth Ave., New York 11.*

Machines for automatic package coding

Four new imprinting machines for automatic production-line coding of packages will be introduced at the PMMI Show this month by Gottscho. The Model TMT Markocoder imprints the tops of cans, jars, bottles and other containers at reported speeds of up to 1,000 per minute. It can be attached to existing production lines. Among its cited features are the ability to imprint deeply recessed surfaces, to compensate automatically for height or depth variations and to function for long periods without attention. The second new item is the Series 450 Rolacoder attachment for roll-through labeling machines. It imprints code data on wraparound labelers. Running at conventional labeler speeds, it is designed primarily for imprinting on can or bottle labels, but [*Continued on page 210*]



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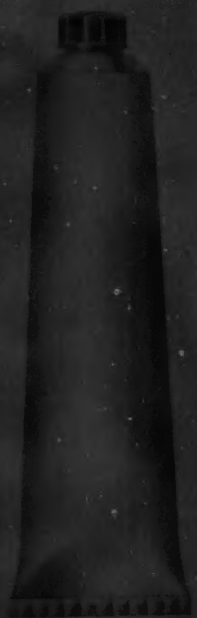

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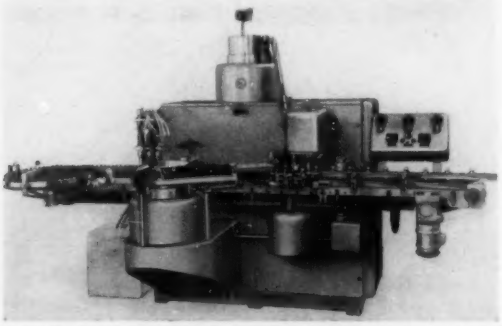
can also imprint small cartons on a conveyor line. The third imprinting attachment to be shown is the Series 210 Rolacoder. It codes the rear ends of shipping cases as they travel along a conveyor or through the sealer. Compact design and light weight make it ideal for use where attachment space is limited, says the supplier. The fourth unit is the Model 790 Rolaprinter, which incorporates a vertical flexographic printing attachment. The automatic imprinter is designed for placing high-quality, precisely located imprints on the side surfaces of cartons, cans or cases. *Adolph Gottscho, Inc., Hillside, N.J.*

Plastic-and-paper bag maker

New from H. G. Weber is a high-speed garment-bag-making machine that makes bags having full-face polyethylene film over a backing of paper. It will be on display at the PMMI Show this month. According to the supplier, bag-making speeds range between 180 and 200 per minute for combination bags. Bags of varying sizes can be made, and changeover is reported to be a fast, easy procedure. The machine will also make all-paper bags or bags with film strips of varying widths. *H. G. Weber & Co., Kiel, Wis.*

Automatic vial filling and closing

An automatic vial-filling and closing machine, designed for use in the food, cosmetics, chemical and pharmaceutical industries, has been developed by Höfliger & Karg, West German machinery manufacturer. It will be exhibited at the



PMMI Show this month by Burnet, the company's American distributor. The Model LFS can accommodate all types of liquids, and is adjustable to handle a wide range of vial sizes and shapes. After filling, the vials can be fitted with such closures as rubber stoppers, aluminum caps and droppers with screw caps. Vials are brought automatically to the unit's storage plate. They are then conveyed to a multihead filling station. Either vacuum filling or plunger-pump filling can be done. *The Burnet Co., Paramus, N.J.*

Wrapping and bundling machinery

Scandia reports that it will introduce several new packaging machines at the PMMI Show this month. The machines feature automatic wrapping, multiple wrapping and bundling. Among the new units is the Model 508 semi-automatic wrapping machine designed for use with large-size packages. Wrapping speeds of up to 45 items per minute can be achieved, says the supplier. Another new machine is the Model 609 automatic wrapping and multiple-wrapping machine. It is claimed to offer quick adjustability over a wide range of single packages as well as multipacks. The supplier also will show a new turret-type automatic wrapping machine for small-size packages. It is suggested for use in the confectionery and drug industries. *Scandia Packaging Machinery Co., North Arlington, N.J.*

Miniature marking attachment

Registered marking of extreme clarity is one of the advantages claimed by Bell-Mark for its new Model 1006-A Electra-Printa. It will be demonstrated at the PMMI Show this month. The new attachment can be integrated into any packaging line, says the supplier. It is designed to mark clear imprints on coated materials including foil, glassine, cellophane and other hard-to-print surfaces. Registered marks can be imprinted on various cut-off lengths without changing cylinders, the company reports. Imprints measure either 3 by 1 in. or 3 by 2 in. The miniature, electrical marking unit is operated by an automatic solenoid. *Bell-Mark Corp., 92 S. Sixth St., Newark 7.*

Case-sealing and labeling machinery

New case-sealing and labeling machinery, produced by Elliott Mfg., will be displayed at the PMMI Show this month. The supplier's 1960 model automatic top-and-bottom shipping-case sealer is small in size and streamlined in appearance. Among its cited improvements are heavy-duty construction, smooth operation, adjustability for a wide range of case sizes and new safety features. Another case sealer from the company is a production-line unit for manual gluing and sealing. The third new unit is the 1960 Elliott Labeleer. Designed for use with glass containers, it is claimed to offer labeling speeds up to 180 per minute. Container-size adjustment takes 10 to 20 minutes. *Elliott Mfg. Co., Fresno, Calif.*

Label dating and coding unit

Codedge is a machine that dates or codes labels of any size or shape in packets of 1,000 or more at a time. Available from Griffin-Rutgers, the unit is claimed to have an output up to 2,000 labels per minute, for lower labor costs. The machine will be exhibited at the PMMI Show this month. Dating is effected by cutting a series of small notches in one edge of the label, later matching it with a code card. Codes can be formed to identify dates, batch numbers, production lines, operators or other desired information. Depth of cut is adjustable, and may be practically unnoticeable, yet readable, says the supplier. *Griffin-Rutgers, Inc., 41 E. 42 St., New York 17.*

Side-weld polyethylene bag machine

Schjeldahl's 41-in. side-weld polyethylene-bag machine, which will be seen at the PMMI Show this month, is capable of running two separate printed webs simultaneously. The machine, Model S-16T, can produce bags of two types at the same time. One is fabricated from a roll of tubing, the other from a roll of sheeting. Other new components for bag machinery to be exhibited by the supplier include an improved ventilating-hole-punching attachment; a 1-in.-diameter single-hole drill, liquid tight and spot sealer, and an automatic jog-index stacker machine. *G. T. Schjeldahl Co., Northfield, Minn.*

Protective case packer

Especially designed for use in the food, drug and chemical-packaging industries is Miller Hydro's case packer, which will be seen at the PMMI Show this month. The automatic machine is available in several models, for packing jars, bottles, flasks or cans. A double-cushioning system, using air and foam rubber, is one of the unit's outstanding features. It eliminates bottle breakage, product damage and label scarring, says *Müler Hydro Co., Bainbridge, Ga.*

New food-filling machinery

Anderson Bros. has introduced a rotary filler and capper, a sanitary pump for delivering food for packaging and a power filler for use by small-volume food packagers. All three items will be on display at the PMMI Show this month. The rotary filler and capper, Model 600, accommodates plastic or paper nesting-type cups ranging in capacity from ½ oz. to 1 oz. The unit is designed for packaging individual servings of cream, catsup, mustard, jelly, syrups and other viscous or semi-viscous products. Paper or plastic inset or cover-all lids can be applied by the machine as well. The new sanitary pump, Model 520, is engineered to pump 20 gals. per 100 rpm. The unit is available in eight different variable capacities, ranging from 12.8 to 555 rpm. It will deliver such foods as cottage cheese. The new power filler,

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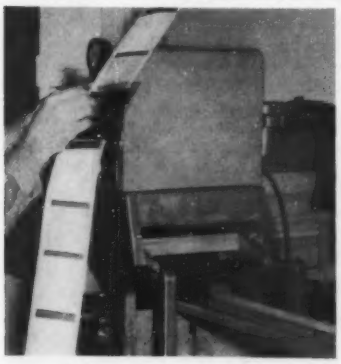
reported to be low in cost, also is designed for use in the packaging of cottage cheese and similar food products. *Anderson Bros. Mfg. Co., Rockford, Ill.*

Predicting paperboard printability

A machine that reportedly will predict with accuracy the printability of paperboard has been developed by Diamond Gardner's Gardner Div. Called the Print Smoothness Tester, the device is essentially a bench-model gravure press that includes special design features for testing paperboard. Said to be the product of four years of research and development, the tester provides a numerical smoothness rating by counting dot misses via a specially designed template. Problems of subjective judgment are eliminated, says the supplier. Advantages cited for the new unit are that ink film remains constant for a series of prints without the need for adding make-up ink, and that pressure is obtained by spring or air loading rather than by clearance. Since no adjustments in pressure are needed for changes in caliper, the operation can be performed speedily. Measurements of the tester are 54 by 25 by 27 in. *Gardner Div., Diamond Gardner Corp., Middletown, O.*

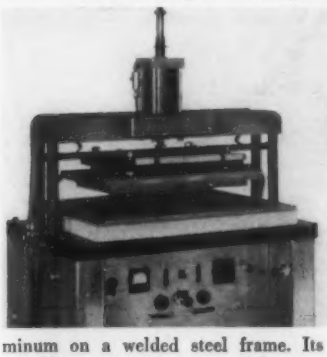


Can-tying machine

Storage and shipment of cans is made easier with its new can-tying machine, says B. H. Bunn. The machine ties up to 12 five-gal. cans at a time. A 30-in.-wide, waist-high table accommodates two rows of six cans each. After tying, the bundled cans are ready for palletizing. According to the supplier, the new unit will tie smaller bundles or smaller cans without adjustment of the machine or of twine tension. Adaptation to varying sizes and shapes is automatic. *B. H. Bunn Co., 7605 Vincennes Ave., Chicago 20.*

New plastic-sealing machine

Reeve Electronics has introduced to packagers of products in thermoplastic films a new plastic-sealing machine, the Model C-74. According to the supplier, the low-priced new unit is designed for efficiency and convenience of operation. Equipped with a two-button start for added safety, the machine is adaptable to all types of sealing operations within its 23-by-29-in. platen area, says the manufacturer. The sealer is constructed of heavy-gauge aluminum on a welded steel frame. Its controls include: a variable vacuum capacitor stepless power control; an automatic heat-cycle timer; on-off switches with red and green pilot lights, to indicate filament voltage on and sealing power on; a meter and switch for checking plate and grid current; a hand- or foot-operated air valve, to open and close the press, and a power on-off foot switch. *Reeve Electronics, Inc., 617 W. Lake St., Chicago 6.*



Remoistenable adhesive for acetate

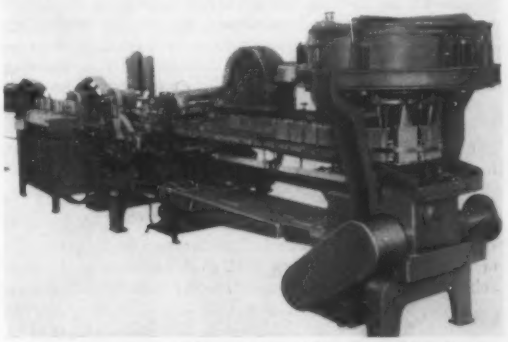
A remoistenable adhesive for use on acetate and other plastics is being offered by Adhesive Products. Called Re-Tac, it is clear and reportedly will dry transparent and tack-free. When moistened with water, an aggressive tack immediately develops, says the supplier, making it possible to adhere the acetate or other plastic to glass, paper, metal or other material. Details are available from *Adhesive Products Corp., 1660 Boone Ave., New York 60.*

Economical six-pack can carton

Claimed to combine effective end-panel identification with minimum packaging-material cost is Packaging Corp.'s new Contour-Pack six-pack can carton. According to the supplier, the new carton permits the use of economical paperboard stock without sacrificing carton strength. The end panels are set at a 45-deg. angle, securely holding the cans in position until they are removed by the consumer. Packagers can achieve greater brand identification by printing on these panels, the supplier points out. Another advantage cited for the partial-wraparound panels is that they strengthen carton sides to prevent bowing and to improve stackability for neater displays. Cans are easy to remove from the new six-pack carton, which can be used on carton-filling machinery operating at speeds up to 1,200 cans per minute, says the company. *Packaging Corp. of America, Ohio Boxboard Div., Rittman, O.*

New carton-filling system

Improved filling accuracy for products with varying densities is possible with its new Neverstop automatic carton-filling and sealing system, says FMC. Maximum speeds and optimum accuracy, claims the supplier, are achieved via a combination of volumetric filling and an electronic check-weigher equipped to feed back data. The built-in check-weigher automatically weighs every carton after it is filled. Package weights are recorded and the averages fed back to the rotating filling head to adjust the amount of fill as changes in density occur. Extreme overweight and underweight cartons are rejected before seals are set in the drying conveyor. High-speed filling of free-flowing products at up to 400 containers per minute is accomplished, the company says, by mechanical telescoping pockets arranged on the perimeter of a revolving filling head. *FMC Packaging Machinery Div., Stokes & Smith Plant, 4942 Summerdale Ave., Philadelphia 24.*



Ink for decorating polyethylene

Rubba, Inc., reports that it has developed a new marking and decorating ink that can be used on treated or untreated polyethylene. Called Rubbagrip, it is suggested for labeling or decorating polyethylene bottles and squeeze containers. The ink reportedly remains permanently flexible, and will not chip when flexed. Details are available from *Rubba, Inc., 1015 E. 173 St., New York 60.*

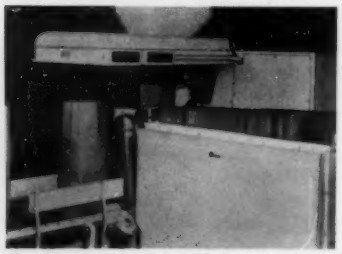
Baler reduces bag damage

Tol-O-Matic has introduced an automatic baling machine for loading sacks of flour and similar products into paper baler bags or burlap shipping sacks. It is adjustable for

different sizes of bags and bales. The company's Series 50-100 Baler is claimed to increase production and reduce packaging costs through elimination of bag damage. The machine, which is operated by one man, shapes the filled bag so that it will slide easily and safely into the shipping bag. This, the supplier points out, allows easier handling, palletizing and storage, and also permits reduction in the length requirements of shipping bags. The pneumatically controlled machine is constructed of heavy steel. *Tol-O-Matic, Inc., 246 Tenth Ave. S., Minneapolis 15.*

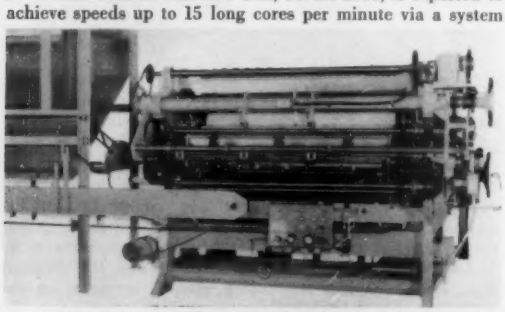
Open-mouth multiwall-bag feeder

New from Bemis is a fully operational automatic open-mouth multiwall-bag feeder. Called the Auto-Mac, it operates at a rated speed of 16 bags per minute. Higher speeds can be obtained, says the supplier, with some free-flowing products with ample bin-supply systems. The unit, which can accommodate a wide range of bag sizes from 50 lbs. up, is equipped with a magazine that holds a large supply of bags. A new control system is designed for simplicity of operation. It consists of a switch to activate the cycling operation and individual controls to regulate speed. Two handwheels adjust bag width and length; no additional adjustments are required. In machine operation, the empty bag is fed automatically to the bag-holder, which receives discharge of product from an overhead scale. Manual bag placement on the bagholder is eliminated, the supplier says. After product discharge, the filled bag is delivered automatically to the closing station. *Bemis Bro. Bag Co., 111-H N. Fourth St., St. Louis 2.*



High-speed automatic core loader

Paper Converting Machine is introducing a high-speed automatic core loader. The new unit, Model 2765, is reported to achieve speeds up to 15 long cores per minute via a system



for feeding and positioning cores that uses a simple conveyor and pushing action with no reciprocating mass. It is designed to coordinate with an automatic rewinder in production layouts. According to the supplier, the new machine assures positive feed and positioning of cores. A roller system guides the mandrel into the incoming core. Cull discharge and storage are incorporated in the core loader, which has log-storage facilities for slit-roll discharge. *Paper Converting Machine Co., Green Bay, Wis.*

'Super-tough' polyethylene film

A "super-tough" polyethylene film that is claimed to permit a 40% reduction in film gauge for heavy-duty industrial bags has been developed by Chippewa Plastics. Despite the thinner walls, bags fabricated from the new film are reported to have improved puncture and snag resistance. Gauge reduction also is expected to reduce the cost of its Type B industrial bag, the company notes, bringing it into competition with industrial bags fabricated of other materials. Incorporation into the finished bag of the supplier's Chipp-a-Weld seal is claimed to bring the strength of sealed areas virtually up to the strength of the bag itself. Suggested applications of the thinner-gauge polyethylene industrial bag are in the packaging of dry chemicals, fertilizers, seed corn, powdered milk, detergents, vitamins and many other products that require a positive moisture barrier. Contact *Chippewa Plastics Co., Chippewa Falls, Wis.*

Vacuum-formed plastic trays

Designed for use in the packaging of such diverse products as candy, fruits, electronic parts, light bulbs and jewelry is National Packaging's new Pak-Appeal vacuum-formed plastic tray. The supplier reports that the tray is available in a variety of plastic materials, including polyvinyl chloride and oriented polystyrene. The multiple-pocket tray is made to customer order, to fit inside an outer container. Any shade of color, as well as almost any type of rigid plastic tray, can be provided to suit customer requirements, says the company. Reduced labor costs, due to faster packaging possible with multi-unit trays, is cited by the supplier as a major advantage of its new item. Greater product protection and enhanced product appeal also are reported as advantages of the vacuum-formed tray. The company reports also that it has machinery for vacuum forming at speeds fast enough to permit economy even in limited-quantity package-forming runs. *National Packaging Corp., Fort Wayne, Ind.*

Automated skin-packaging machine

An automated skin-packaging machine, claimed to offer packaging economies as well as initial low cost, is available from Skin-Pak Machinery. The company's Model F, with a bed size of 22 by 34 in., accommodates a film width of 25½ in., with a drape of 5 to 8 in. Heating cycle and vacuum time require a maximum of 15 seconds, says the supplier, for a skin-packaged board of 22 by 34 in. Each board can then be cut apart to produce multiples of individual packages. For blister or bubble packaging, both male and female molds can be used for a fast, automated packaging cycle, it is said. A patented "Equi-Thermo" heating unit is reported to deliver uniform heat throughout the film area, because of a special woven-wire construction. The new machine (also available in a smaller model accommodating board sizes up to 17 by 22 in.) is equipped with a safety interlock requiring the use of the operator's two hands, to prevent accident. *Skin-Pak Machinery Co., Paterson, N.J.*

Protective green bottle glass

"Filtre Ray" is an emerald-green bottle glass that has been developed by Glass Containers Corp. It is designed to protect products from the harmful effects of ultra-violet rays. The light-screening glass containers are available in a wide range of sizes and styles. They can be fired with ceramic labels. According to the company, the protective containers are offered at no increase in price over conventional containers. *Glass Containers Corp., Fullerton, Calif.*

New loading and unloading units

Emhart Mfg. reports the availability of two new machines: a "piggy-back" packer and a case unloader. The packer, Type 860 AA, loads cans or bottles into cases, and can be adjusted for use with two, three or four lanes. It will cycle at a rate of 25 cases per minute. It comes with a high-speed case feed which is positioned immediately under the loading mechanism. Case feeding can be in the same or opposite direction to container flow. Change-over from one

WRAPAK

WRAPAK is a modest packaging investment that pays immediate dividends to the manufacturer, the distributor and the retailer in many product lines.

Dividend to the manufacturer: WRAPAK automatic packaging machinery wraps filled containers (cans, cartons or bottles—glass, metal and plastic) of your product with WRAPAK cartons at the high speeds demanded by today's production schedules. In many applications, the WRAPAK system uses substantially less material than is used in conventional partitions and master packers.

Dividend to the distributor: WRAPAK cartons save time in handling and price marking—time and material in reshipment of less than case lots to retail customers.

Dividend to the retailer: WRAPAK makes retail stocking, price marking, and selling easier, more efficient and less costly.

Container Corporation has combined the best qualities of packaging structure, machinery and visual design into the WRAPAK system . . . Let this unique system help make the distribution of your product a more profitable operation—all the way. Write or call for further information.

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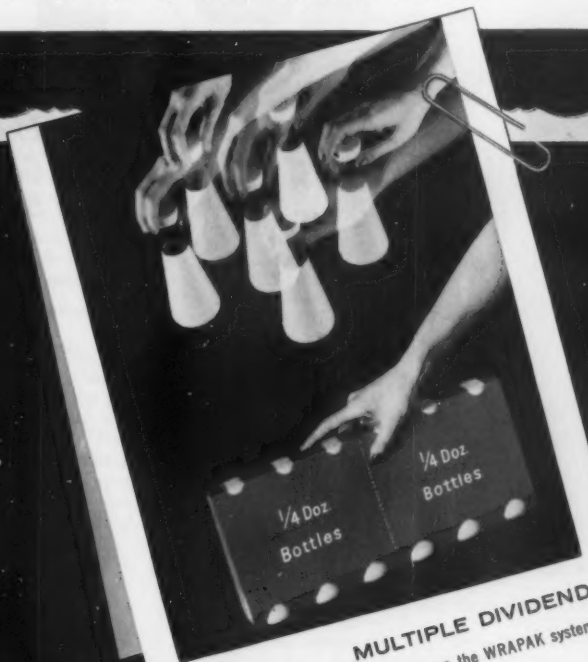

MULTIPLE DIVIDEND

Please send me the new brochure on the WRAPAK system.

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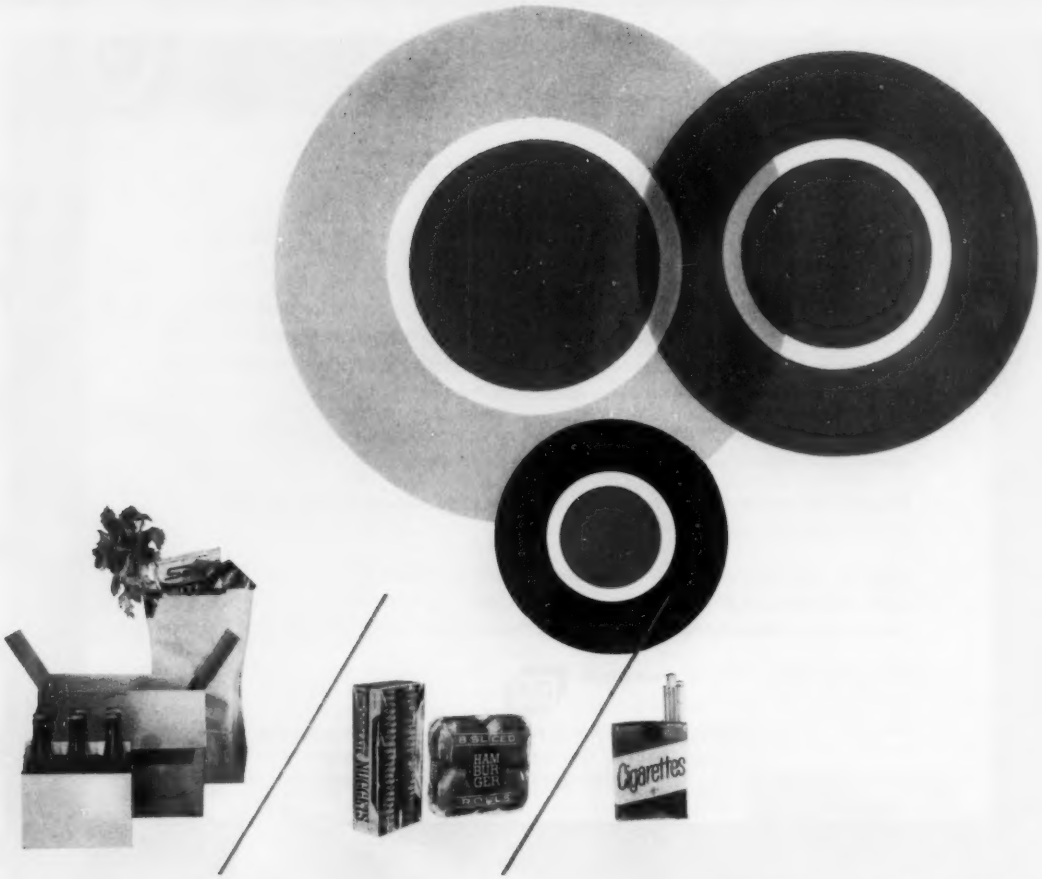

A Packaging Decision Can Change the Course of a Business

With a new package—you can bring a dying business back to life . . . or give a healthy business an added force.

If you're considering a new package, look to Olin Mathieson's Packaging Division. Whether it's a package for shipping or a package for selling, we can provide you with ideas which can help cut costs or increase sales. The Packaging Division manufactures Olin Cellophane and Olin Polyethylene, Frostkraft paper and paperboard, corrugated shipping containers, multi-wall sacks, grocery bags and folding cartons. Also Ecusta cigarette paper, light-weight printing and specialty papers. Call in an Olin Mathieson representative today.

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Olin Cellophane, N. Y. 21, N. Y. Frostkraft Products, West Monroe, La. Ecusta Papers, Pisgah Forest, N. C.

container size to another reportedly can be accomplished in minutes by means of a lock that permits ready removal and replacement of grid and pusher plate. The supplier's new Standard-Knapp case loader removes glass containers packed upside down so as to prevent entry of shipping-case debris. Bottles are gripped at the bottom and lifted out of the case in upside-down position, eliminating the possibility of dirt entering them as they clear the case. *Emhart Mfg. Co., Portland Div., Portland, Conn.*

Compression steel-strapping machine

Its new CSM compression strapping machine simplifies, automates and speeds up steel-strapping operations to produce significant cost reductions, claims Signode. The new

machine compresses the load, then feeds, tensions and seals the strap automatically. One operator does the job, in a matter of seconds, says the company. Also available from the supplier is the Model RCNS pneumatic sealer. It features a pistol grip that permits easy, convenient one-hand sealing of ¾-in. steel strapping. The device weighs 6 lbs. When the operator sets the seal and pulls the trigger, compressed air actuates positive seal crimping. *Signode Steel Strapping Co., 2600 N. Western Ave., Chicago 47.*

'Super-pure' aluminum is offered

Aluminum of guaranteed 99.992% purity is now being produced for commercial use by Aluminum Foils, Inc. The "super-pure" aluminum is offered in various forms, including foil and pig of various sizes. An electrolytic process, developed in Europe, is used to achieve the purity of its aluminum, says the supplier. It is being marketed under the name of Raffinal. *Aluminum Foils, Inc., Jackson, Tenn.*

Can-closing and embossing unit

New from Continental Can is a machine for embossing and closing 1-qt. oil and anti-freeze cans. The company's Model 450-HCM reportedly operates at speeds up to 600 cans per minute. Equipment included with the standard machine consists of a motor bracket, heavy-duty marker, basic filler drive, electrical attachments, universal floor stand, 90-deg. discharge with idler sprocket and atmospheric change parts for the can. The machine's seaming mechanism and cover feed can be adjusted to handle aluminum cans. *Continental Can Co., 100 E. 42 St., New York 17.*

Round-hole perforator unit

A new round-hole perforator machine, for use with cellophane, polyethylene, polyester and other films and paper, is offered by Laukhuff-Pratt. The unit requires only one foot of floor space parallel to the web material. Claimed to operate at press speeds, the new machine will punch holes of the following diameters: 3/32 in., ⅛ in., 3/16 in., or ¼ in. It will accommodate web widths of 30, 36 or 42 in. It can be adapted for other widths. A side adjustment for centering with the web is provided. Spacing of individual sets of punch and die wheels is adjustable laterally to the web. Machine operation is said to be smooth and quiet and, the supplier claims, minimum maintenance is necessary. *Laukhuff-Pratt Mfg., 3097 W. Mill Rd., Milwaukee.*

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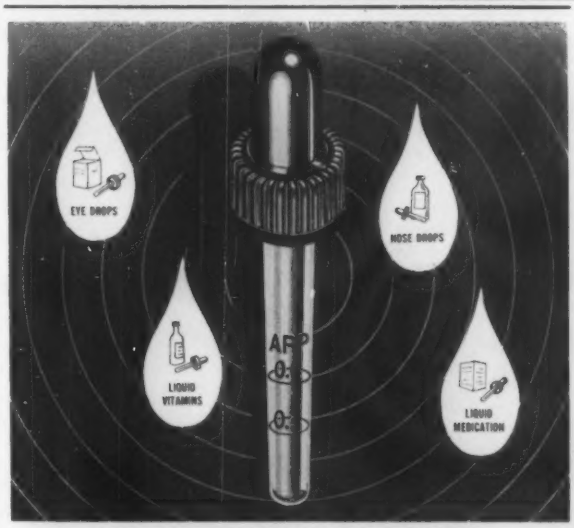


a complete line of plastic and glass droppers and assemblies

Skilled craftsmanship, specialized machinery and prompt service have been hallmarks of Colonial Applicator Company for more than two decades. Services range from a creative art department for original designs; precise silk-screening and hot stamping, to the latest boat packs wrapped in Dupont K cellophane. Sample assemblies made immediately upon request. Representatives in major cities.

COLONIAL APPLICATOR CO.
VINELAND, NEW JERSEY

TWO NEW Mettler BALANCE UNITS FOR AUTOMATED PRODUCTION:

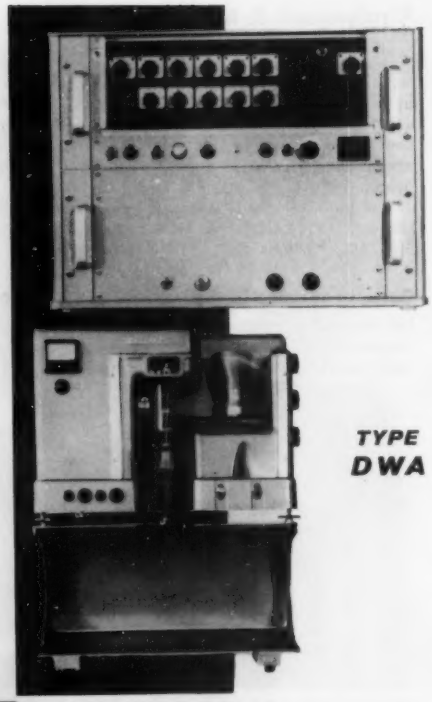
TYPE DWA — Automatic Filling Balances 2 models with capacities of 10 and 100 grams

TYPE KWA — Automatic Check-weighing and Sorting Balances 4 models with capacities of 1, 10, 100 and 1000 grams

The units are designed for use in a fully automated production line.

The electronic control unit not only controls the operation of the filling or check-weighing unit itself, but provides electrical impulse signals, which can be used to activate, adjust and direct a preceding or subsequent operational step.

The new automatic balances will be on display for the first time at the Mettler booth No. 339, 27th Exposition of Chemical Industries, Coliseum, New York, Nov. 30-Dec. 4, 1959.



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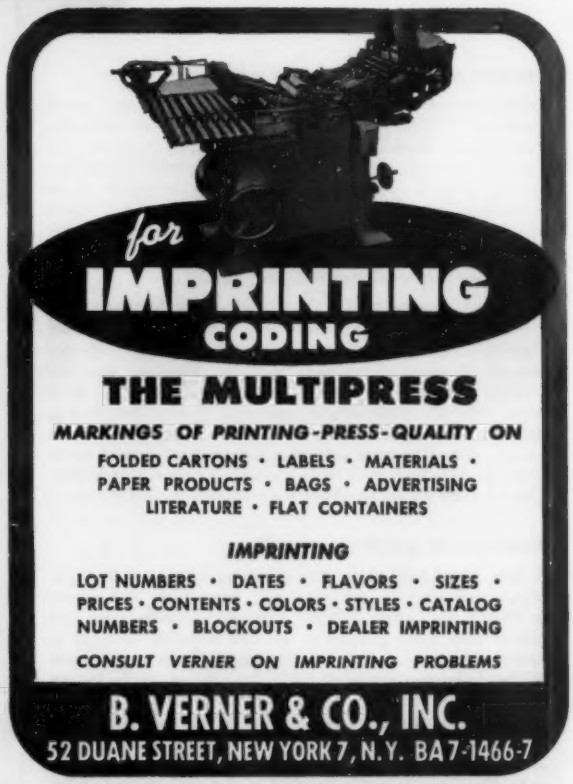

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"We need Schjeldahl versatility to keep our customers happy."

You'll hear plenty of comments about the versatility of Schjeldahl machines. No wonder! With a Schjeldahl you can run bags ranging in size from 3″ x 3″ to 40″ x 70″ in any shape desired. You can turn them out in film as thin as .0075 mil. or as thick as .010 mil.—sideweld or bottom seal. *No other machine can match Schjeldahl's versatility and production capacity.*

Not only will a Schjeldahl give you the versatility you need to keep customers happy, it will help you get more customers. Write today for detailed information. Better yet, see us at the PMMI Show. We'll be there with the new Model S-16T, plus a full line of attachments and accessories.

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Northfield, Minnesota

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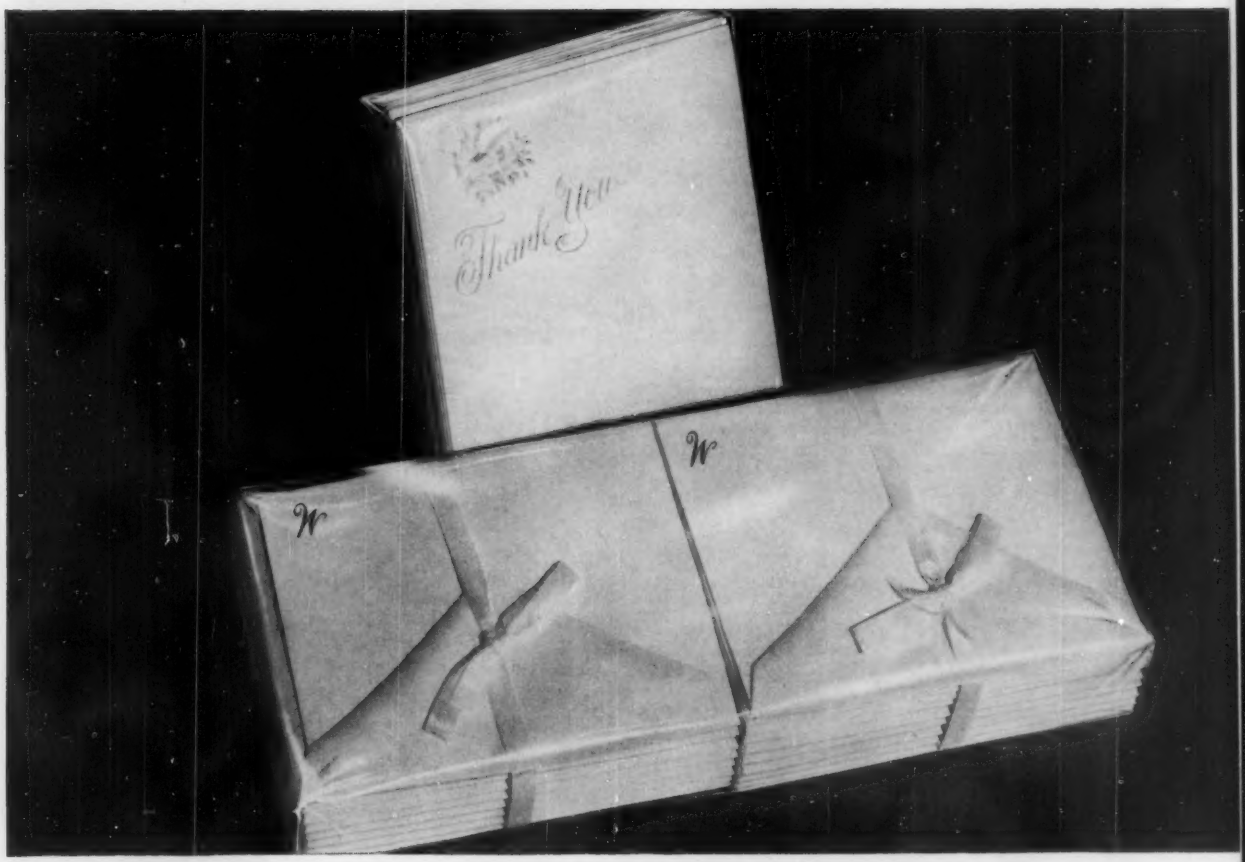


Which One

Other versatile cast films by Ludlow are:

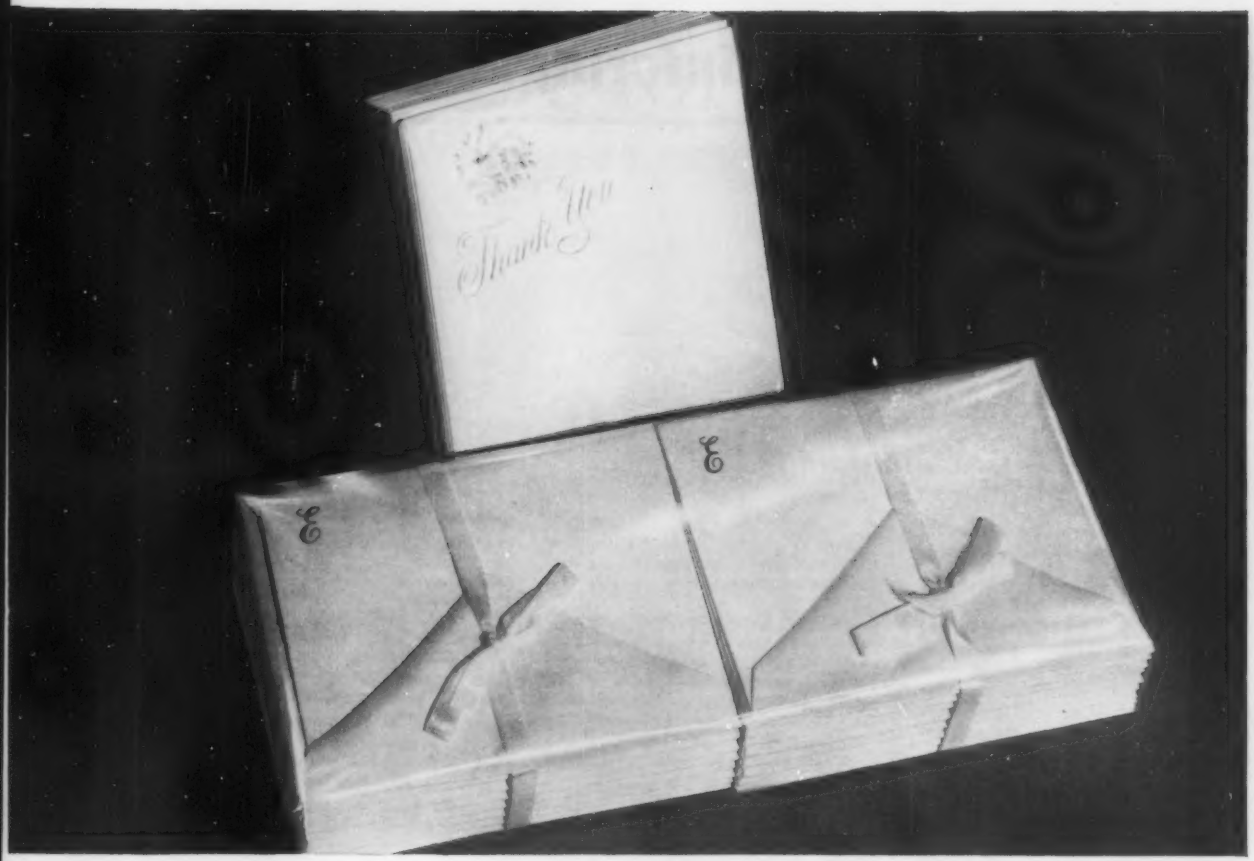
ORTHOPLENE* — low-density polyethylene (Type I)

PARAPLENE* — high-density polyethylene (Type III)

CAPLENE* — made from nylon-6

PROPLENE* — made from polypropylene resin

*Trademark of Ludlow Papers, Inc.



Has the Poly Overwrap?

These stationery packages *look* almost identical. But the group on the left is wrapped with cellophane, while the group on the right is wrapped with — that's right — *polyethylene!*

This is no ordinary polyethylene, however. This is METAPLENE* — a Type II medium-density polyethylene made by Ludlow's new cast film process. Clear, sparkling METAPLENE gives you many advantages over old-style films. Lower cost, for example, plus longer shelf life, excellent printability, and no heat sealing problems.

METAPLENE is probably the most versatile film ever made. It performs brilliantly on all kinds of packaging equipment including bag, pouch, skin pack and wrapping machines. And you can use it to package almost any product . . . including foods.

But, why not get *all* the facts? Write today for samples and technical data on METAPLENE and other new plastics made by Ludlow's new cast film process.

LUDLOW PLASTICS

NEEDHAM HEIGHTS 94, MASSACHUSETTS

Ludlow Plastics is a division of LUDLOW PAPERS, INC., manufacturers of fine papers gummed label papers, gummed tapes, building papers and packaging papers. Ludlow Papers, Inc., is a subsidiary of Ludlow Manufacturing & Sales Company, manufacturers of jute and jute products.

For Your Information

The **Lithographers & Printers National Assn.** has begun accepting entries in the 1960 Lithographic Awards Competition and Exhibit. The competition is open to packagers, lithographers, designers, artists and advertising agencies. The deadline for submission of entries is Jan. 18, 1960. A total of 306 winners—six in each of 51 categories—will be chosen for awards and nationwide exhibition by a panel of 36 experts. Winners will be announced on April 25 at the 55th LPNA Convention, to be held at Boca Raton Hotel and Club, Boca Raton, Fla. For information on rules, regulations and entry blanks, write to: LPNA Awards Competition, Lithographers & Printers National Assn., 597 Fifth Ave., New York 17.

Shipments of folding cartons dipped slightly in August, interrupting an upward trend that had continued since February, reports the **Folding Paper Box Assn. of America.** But, says FPBAA, cumulative volume through August is 3.5% ahead of the same eight-month period in 1958.

A new booklet from **Glass Container Mfrs. Assn.** traces the history of glass making from its prehistoric beginnings to the most modern methods. The 30-page booklet, which is titled "Billions of Bottles," is profusely illustrated. Copies, in limited quantities only, can be obtained without charge by writing to GCMA, 99 Park Ave., New York 16.

The 20th annual meeting of the **Fibre Box Assn.** was held Oct. 8-9 at the Waldorf-Astoria Hotel in New York.

Newly elected directors of the FBA include: **Norman Albin** of Triangle Container Corp., **John G. Kain** of Star Box & Printing, **Robert D. Love** of Love Box Co., and **D. C. Shepard, Jr.**, of Menasha Woodenware Corp.

A one-week conference on fundamentals and new developments in packaging, plant layout and materials handling will be held at the **University of California** center at Lake Arrowhead, Nov. 15-20. Experts will discuss current ideas for general industrial problems in these fields. Specific questions and applications will be analyzed during evening workshops. Discussion topics will include problem layouts, material-handling systems, in-plant handling, cost factors and military packaging. Further details and application forms are available from Dept. K, University of California Extension, Los Angeles 24.

Two achievement awards, to be presented annually for outstanding contributions in the fields of government packaging, materials handling and logistics, have been established by the **National Institute of Packaging, Handling & Logistic Engineers.** Nominations should be filed before Jan. 1 on the Institute's official form, which is obtainable from NIPHLE headquarters at 402 Washington Bldg., Washington 5, D. C.

Plastics 1959, an international fair of the industry, was held in Düsseldorf, W. Germany, Oct. 17-25. Exhibitors from 16 European and overseas countries presented the products of their research, manufacture and design to members of the trade from all parts of the world. On Oct. 19, European and U. S. technicians reported their research findings at an International Symposium on the "Aging of Plastics." The **8th German Plastics Convention** was held in conjunction with the Fair.

Proceedings of the 22nd annual convention of the **Super Market Institute**, held in Atlantic City last May, are now available to non-members at $5 per copy. The printed record of SMI's four-day program based on the theme, "The Big Idea Exchange: How to Harness the Power of People and Ideas," may be obtained from the Institute's headquarters in Chicago at 500 N. Dearborn St.

A two-day conference on **Packaging Specifications** was held on the 5th and 6th of last month at **Purdue University**, Lafayette, Ind. All aspects of this essential part of packaging engineering were covered and specific problems of participants were discussed. Military specifications, terminology and check testing were given consideration with a view to compiling sound packaging specifications to meet given conditions.

INTERPACK 1960, the second **International Packaging Exhibition & Display of Confectionery Machinery**, is scheduled to take place next April 20-27 in Düsseldorf, Germany. Space bookings already have exceeded the size of the 1958 show by 65%, say its sponsors. More than 34% of this area is being reserved for packaging-machinery displays, 29% for packaging materials and packages. In addition to the main exhibition, INTERPACK 1960 will feature a number of special shows and information bureaus organized by research firms, trade schools and other groups.

A brochure describing the firm's new, "budget-run," full-color printing has been compiled by **Muirson, Inc.**, label manufacturer of San José, Calif. Limited-budget, short-run printing jobs can be effected at economical prices, according to the company, and the full story on this development is given in "Cut Your Printing Costs with Muirson Budget-Run." The brochure is available without charge through Muirson's plants in Meriden, Conn., Peoria, Ill., and the San José headquarters.

In an address to an **American Chemical Society** symposium on "Chemical Marketing in the Competitive Sixties," held in Atlantic City recently, delegates were told that the U. S. plastics industry is expected to increase production 100% over the next ten-year period. New applications will do much toward creating new markets and plastics will, in certain uses, replace both metals and glass, according to **Paul Mayfield**, v.p. and director of Hercules Powder, who made this forecast of growth.

Charles B. Stauffacher, exec. v.p. of the Robert Gair Paper Products Group of Continental Can Co., New York, has been elected a director of **National Paperboard Association.**

A demonstration of the pre-packaging of fruits and vegetables was a highlight of the special show, **Packing & Packaging**, staged at this year's ANUGA Fair, the 40th annual **General Exhibition of Fine Foods & Provisions**, held in Cologne, W. Germany, Sept. 26 through Oct. 4. In addition to newly developed packaging materials, visitors were shown the latest types of packaging equipment, developed both in Germany and abroad. In conjunction with this special show-

Events

Nov. 3-5—**Packaging Assn. of Canada**, 8th national packaging exposition, package and display competitions—1959 entries and winners, Exhibition Grounds, Toronto.

Nov. 9-11—**American Management Assn.**, packaging seminar ("Fundamentals of Packaging Specifications"), Hotel Astor, New York.

Nov. 9-11—**National Paperboard Assn.**, annual meeting, Waldorf-Astoria, New York.

Nov. 12-13—**American Society of Industrial Designers**, meeting ("Planning by Design—In A World of Product Change"), Statler Hotel, New York.

Nov. 16-18—**Packaging Institute**, 21st annual national packaging forum, Hotel Statler, New York.

Nov. 16-19—**American Bottlers of Carbonated Beverages**, soft-drink industry exposition, St. Louis.

Nov. 17-20—**Packaging Machinery Mfrs. Institute**, biennial show, Coliseum, New York.

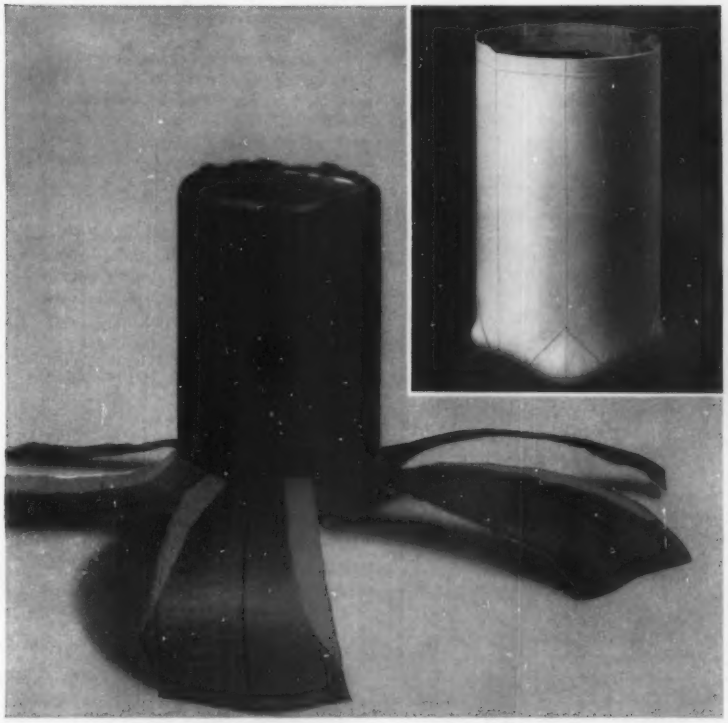
Nov. 30-Dec. 4—**27th Exposition of Chemical Industries**, New York Coliseum.

Dec. 1-4—**Super Market Institute**, mid-year conference, Americana Hotel, Bal Harbour, Fla.

Dec. 7-9—**Chemical Specialties Mfrs. Assn.**, 46th annual meeting, Mayflower Hotel, Washington, D. C.

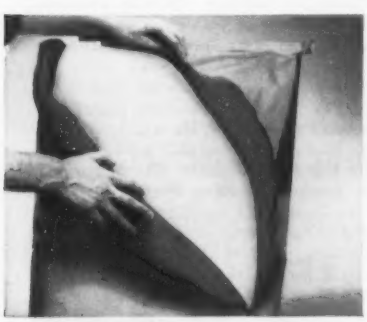
SILICONE NEWS from Dow Corning

Slick Trick for Stickiness



Put Slip in Packages, Zip in Sales ...with Syl-off Paper Coatings

Do your customers require engineered anti-adhesiveness — the right degree of release that lets sticky materials come away cleanly and quickly from containers, wrappers, interleaving or backing papers? You can provide the right anti-adhesiveness . . . solve your customers' product-sticking problems . . . by offering specialty papers treated with Syl-off*, silicone paper coatings developed by Dow Corning. You'll find but few sticky products cling to paper with a Syl-off coating. Notorious stickers such as asphalt, resin compounds, raw rubber and adhesives release with amazing ease!



Syl-off coatings are easy to apply to one or both sides of paper, paperboard, drum and bag liners, boxboard containers, interleaving sheets, and other types of packaging or protective materials. Syl-off coated backing papers peel free from pressure-sensitive labels, tapes and wallpapers without altering adhesiveness.

Applications Unlimited. Do you have a particular release problem in mind? Syl-off coatings can be applied to provide controlled release on kraft, boxboard, glassine, parchment, foil, plastic film, and other materials. Whatever the surface, these silicone anti-adhesive coatings won't migrate or transfer . . . won't contaminate or be contaminated. Syl-off coatings impart a desirable degree of water repellency and provide nonoily lubricity. Furthermore, Syl-off coatings offer even greater economies in a number of applications where the paper is re-used — the Syl-off coating lasts as long as the paper itself.

Cost Advantages. Syl-off often costs less than other release coatings. And, the lighter weight of Syl-off coatings means additional savings in shipping costs. Remarkably versatile Syl-off paper coatings can be excellent extra-profit producers for your company. For full information about Syl-off and Syl-off coated papers contact our nearest branch office or write Dept. 7323.

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MIDLAND, MICHIGAN

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"I found one way of saving my company a *fabulous* amount of money!

I started ordering our shipping labels from Ever Ready, where you get a 'quality' job at a low, low price—because Ever Ready is one of the largest and the most experienced label producers in the country."

If you use 6,000 or more shipping labels, you'll find amazing savings when you order from Ever Ready! *Write today* to Carol Hampton, our promotion manager, for our helpful brochure.

EVER READY LABEL CORPORATION
353 Cortlandt Street, Belleville 9, New Jersey

F.Y.I. [*Continued*]

within-a-show, a one-day packaging congress was held, featuring talks by experts in the field and providing a chance for international exchange of ideas and technical know-how.

The **European Packaging Federation** participated with an exhibit of packaged food products recently awarded the Eurostar. Among the equipment on view were filling, labeling, wrapping, heat-sealing, gluing and seaming machines. The theme of the show was "Packaging as a service to customers."

New officers have been elected by the **National Printing Equipment Assn.** They are: pres.—**E. O. Vandercook** of Vandercook & Sons; v.p.—**William G. Young** of Miller Printing Machinery, and treas.—**James W. Coultrap** of Miehle-Goss-Dexter and Miehle Co.

Aluminum Co. of America, Pittsburgh, reports that six leading schools of industrial design have been awarded $1,000 each from the Alcoa Foundation. The unrestricted grants were given, says the company, "in recognition of the schools' leadership in providing their students with technical preparation in basic materials." The schools that were awarded grants are the University of Bridgeport, University of Illinois, Illinois Institute of Technology, Philadelphia Museum School of Design, Pratt Institute and the University of Syracuse.

Meat & Produce Packaging in the Modern Super Market is a liberally illustrated, 250-page, spiral-bound book recently published by **Ezra Lapides.** It may be obtained for $3.95 per copy by applying to the author at 33 W. 55 St., New York.

The 14th annual **National Hardware Show** was held at the New York Coliseum from Sept. 28 through Oct. 2. Advance registration for the event was estimated as higher than the previous year's 44,719 figure.

Pierre J. Louis, mgr. of the **French Packaging Institute (Institut Francais de l'Emballage et du Conditionnement)** and secretary of the **European Packaging Federation**, will arrive in New York Nov. 15 for a six-week study tour of American packaging plants and information centers. He will be in New York through Nov. 23, attending the **Packaging Machinery Show** and the **Packaging Institute Forum**, both in New York; will spend a week in Washington, and most of December in the Chicago area. M. Louis may be contacted through the **Packaging Institute**, 342 Madison Ave., New York.

A three-day conference on packaging and materials handling was held Sept. 13-16 at the Wright-Patterson Air Force Base in Ohio. It was sponsored by the **Air Materiel Command** of the U.S. Air Force. Needs of customers and suppliers were discussed by Air Force members and representatives of packaging and materials-handling industries.

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U. S. Patents Digest

This digest includes each month the more important patents of interest to packagers. Copies of patents are available from the U. S. Patent Office, Washington, D. C., at 25 cents each in currency, money order or certified check. Postage stamps are not accepted. Edited by H. A. Levey.

Severable Frozen-Food Carton, Edward J. Risucci, Jackson Heights, N.Y. U.S. 2,896,837, July 28. A carton blank of elongated length which, when set up, provides a package in which frozen foods can be air-tightly contained in separable compartments. Said compartments can be separated one at a time without affecting the integrity of the remaining compartments.

Package, David Rodnon, North Bergen, N.J. U.S. 2,885,071, May 5. A multi-segmented package made of flexible material and intended to contain a plurality of articles in spaced relation. Articles to be packaged, such as cigars, tablets and like products which are consumed in a single use, are enclosed between layers of said flexible packaging material. The layers are sealed to each other to provide connected, closed cells for each of said articles. A tear tape is included to facilitate opening of the package.

Apparatus for Applying Closures to Flexible Containers, Carl Byrd (to Standard Packaging Corp., Chicago, a corporation of Virginia). U.S. 2,897,643, Aug. 4. A machine for filling containers and applying closures to containers.

Container-Filling Valve, Leslie Vadas (to Food Machinery & Chemical Corp., San José, Calif., a corporation of Delaware). U.S. 2,897,855, Aug. 4. A can-filling valve comprising an elongated core having a pair of longitudinal slots, with a bushing encircling a portion of said core.

Curved Guide Rail for Container-Conveyor Transfer, Robert F. Krupp and Jan K. Wagner (to Gerber Products Co., Fremont, Mich., a corporation of Michigan). U.S. 2,897,947, Aug. 4. A conveyor system for containers, comprising a first conveyor, a second conveyor adjacent and substantially parallel to said first conveyor, means for advancing said conveyors, and an elevated guide rail.

Shock-Absorptive Packaging, John L. Gretz (to B. F. Goodrich Co., Akron, O., a corporation of New York). U.S. 2,897,959, Aug. 4. In shock-absorptive packaging, a cushioning pad comprising a coiled strip of open filamentary material wound upon itself about an axis to form a roll, said material incorporating a spaciously intersticed network of mutually entangled, long, resilient filaments.

Crating and Decrating of Bottles, Arthur Graham Enoch and Henry William Longville (to Graham-Enoch Mfg. Co. Ltd., London, England). U.S. 2,897,988, Aug. 4. Apparatus for handling bottles or other containers, comprising bottle-transfer means which are vertically reciprocable and also oscillatable about a vertical axis in order to transport the bottles between bottle pick-up and discharge positions.

Double-Walled Container, Ralph B. Billig and Manuel S. Ziskin (to Kromex Corp., Cleveland, a corporation of Ohio). U.S. 2,897,996, Aug. 4. A double-walled container comprising an inner receptacle having a pair of diametrically opposed, outwardly extending, outwardly open sockets on the outer wall thereof.

Elastic Container with Reciprocating Plunger, Benjamin F. Gassaway (to Flo-Container, Inc., a corporation of Washington). U.S. 2,898,007, Aug. 4. A dispensing device for viscous liquid materials, comprising an elongated container of uniform cross-section throughout a substantial portion of its length, having flexible and resilient side walls along its longitudinal dimension.

Corrosion-Inhibiting Container for Metal Articles, Joseph J. Aid (to Continental Can Co., Inc., New York, a corporation of New York). U.S. 2,898,026, Aug. 4. A container for packaging metal articles and protecting the same from rust and corrosion, comprising at least one wall, at least the inner surface of said wall being composed of paper.

Container for Fluent Materials, William R. Scholle (to Scholle Chemical Corp., Northlake, Ill., a corporation of Illinois). U.S. 2,898,027, Aug. 4. A package of fluent materials comprising a relatively rigid, flat-bottomed, normally sealed outer container body and a liner bag of flexible plastic material containing liquid enclosed within a second, otherwise empty, slightly larger bag.

Carton, Merrill J. Coe (to Sutherland Paper Co., Kalamazoo, a corporation of Michigan). U.S. 2,898,028, Aug. 4. A carton comprising a pair of opposed, relatively swingable and bendable members having outer end portions which overlap when the members are closed.

Bottle-Packaging Machine, Joseph F. Cella (to Cella Machinery, Inc., New York, a corporation of New York). U.S. 2,898,715, Aug. 11. A bottle-handling machine comprising, in combination: a crate-supporting station, a bottle-supporting station, and means operable between the stations to transfer bottles from the bottle-supporting station to a crate in the crate-supporting station.

Bottle Packaging Machine, Joseph F. Cella and Paul Gancia (to Cella Machinery, Inc., New York, a corporation of New York). U.S. 2,898,716, Aug. 11. A bottle-handling machine comprising, in combination: a bottle conveyor, a crate conveyor, and a bottle carrier supported to reciprocate between the conveyors in timed relation with the movements of bottles and crates.

Wrapping Machine, Edward A. Foley (to Masonite Corp., Laurel, Miss., a corporation of Aug. 11. A wrapping machine for wrapping articles, comprising in combination a pair of paper-folding and pressing platen members for successively applying wrappers about the articles, with the side portions of each wrapped in an overlapped position.

Bag-Filling Mechanism, Allen W. Merrell (to Sattley Co., Detroit, a corporation of Michigan). U.S. 2,898,721, Aug. 11. In combination, a horizontal support on which a bag to be filled may be laid on its side and an abutment hinged to said support for engagement with the bottom of the bag.

Machine for Use in the Packaging of a Product, Bernard T. Hensgen (to Swift & Co., Chicago, a corporation of Illinois). U.S. 2,898,722, Aug. 11. A machine for use in placing a product on a flat piece of material, said machine including a conveyor having a predetermined terminus.

Chemical-Freezing Package, Albert A. Robbins (to Kwik-Kold of America, Inc., Las Vegas, a corporation of Nevada). U.S. 2,898,744, Aug. 11. A chemical-freezing package comprising an outer envelope hermetically sealed on all of the edges thereof, said envelope being formed of a thin, flexible, plastic sheet material.

Folding and Gluing Machine, Albert F. Shields (to S & S Corrugated Paper Machinery Co., Brooklyn, a corporation of New York). U.S. 2,898,819, Aug. 11. In a folding machine for forming flat, collapsed, tubular box blanks from flat and scored sheets, said sheets having a pair of longitudinally extending side sections defined by score lines and foldable about said score lines into said collapsed tubular arrangement.

Folding Machine, Albert F. Shields (to S & S Corrugated Paper Machinery Co., Brooklyn, a corporation of New York). U.S. 2,898,821, Aug. 11. A folding machine for forming flat, collapsed, tubular box blanks from flat and scored sheets.

Method of and Apparatus for the Manufacture of Lined Containers, Bernard Strong (to E. Shipton & Co. Ltd., Northwood Hills, England). U.S. 2,898,972, Aug. 11. A method of lining a container having a base and an opening opposite to the base, which comprises providing at least one small vent in the container adjacent its base.

Apparatus for Heat Sealing Metallic Liners in Containers, John B. Wilson (to Reynolds Metals Co., Richmond, Va., a corporation of Delaware). U.S. 2,898,974, Aug. 11. Apparatus for securing a heat-sealable liner in a container, comprising a movable mandrel

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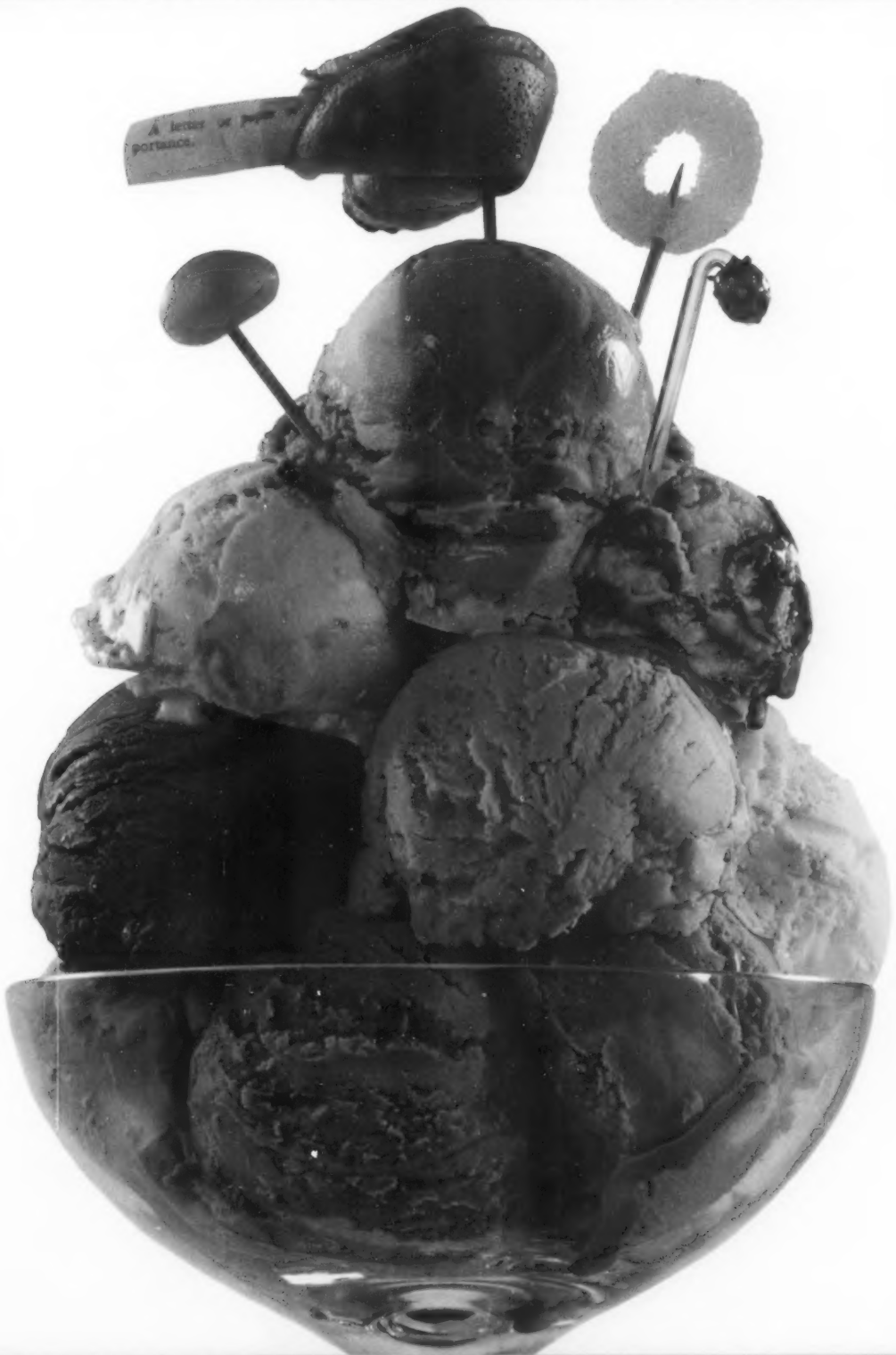

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Patents [*Continued*]

for receiving a liner pre-form and a detached container substantially completely surrounding said pre-form.

Banded String-Handle Infusion-Package Assembly, Hans O. Irmscher (to National Tea Packing Co., Inc., Long Island City, a corporation of New York). U.S. 2,899,045, Aug. 11. A banded package assembly comprising, in combination, a flattened filled infusion bag having a string handle anchored at one end thereof to a closure seam of the bag.

Display Carton, Raymond C. Dreier (to Dreier Brothers, Inc., Chicago, a corporation of Illinois). U.S. 2,899,048, Aug. 11. A display-carton package comprising a carton having telescoping bottom and cover sections, each equipped with side and end walls.

Open-Ended Carton for Packaging Paper Cups and Other Articles, Harold Grinspoon (to Multi-Carton Corp., Springfield, Mass., a corporation of Massachusetts). U.S. 2,899,049, Aug. 11. In combination: a pair of articles having upwardly projecting top rims and downwardly projecting bottom rims.

Dual-Compartment Container Structure, John Henchert and Henry E. Frankenberg (to Continental Can Co., Inc., New York, a corporation of New York). U.S. 2,899,096, Aug. 11. A container structure comprising a container body, a closure top secured to the body by a seam, an overcap, and means removably securing the overcap to the top closure seam in spaced relation above the closure top to provide a compartment for receiving an article.

Method and Apparatus for Counting and Packaging Articles, Eric G. Cleveland and Archibald D. Standley, Jr. (to Delta Engineering Corp., a corporation of Massachusetts). U.S. 2,899,784, Aug. 18. Apparatus for counting articles and packaging said articles in predetermined quantities, comprising means for storing a plurality of like articles, means for removing said articles from said storage means and means for separating said removed articles and advancing them.

Bag-Opening Mechanism for Packaging Machine, Charles B. Harker (to Bartelt Engineering Co., Rockford, Ill., a corporation of Illinois). U.S. 2,899,786, Aug. 18. In a machine for packaging material in a bag, the combination of two flat plates disposed face to face in vertical planes.

Mechanism for Heat Sealing Wrappers and a Method of Sealing Packages, Andrew W. Anderson (to Scandia Packaging Machinery Co., North Arlington, N.J., a corporation of New Jersey). U.S. 2,899,791, Aug. 18. In combination, a platform for supporting movable packages to be sealed, means at one side of the platform for loosely and flexibly supporting a plurality of heating members.

Cellular Carton, Oscar L. Vines (to Continental Paper Co., Ridgefield Park, N.J., a corporation of New Jersey). U.S. 2,900,121, Aug. 18. A blank for a cellular carton having three rows of cells, each row having three or more cells, which blank comprises a rectangular piece of carton stock having a plurality of transverse hinge lines delineating on the blank a plurality of panels.

Heavy-Duty Paperboard Container, Harry F. Drnec, Leonard W. Snyder and Richard H. Johnson (to Container Corp. of America, Chicago, a corporation of Delaware). U.S. 2,900,123, Aug. 18. In a paperboard container, a body portion comprising side and end walls and bottom closure flaps, said end walls having slots intermediate their sides extending from their upper edges.

Carton with Top Handle, Salvatore J. Leone (to The New Haven Board & Carton Co., New Haven, a corporation of Connecticut). U.S. 2,900,124, Aug. 18. A carton having a top and a handle, comprising side walls connected together to form a body of rectangular cross-section, with top flaps attached to the upper edges of respective side walls.

Machine for Loading Cans into Cartons, Francis A. Chidsey, Jr., and Joseph H. Walter (to Container Corp. of America, Chicago, a corporation of Delaware). U.S. 2,900,772, Aug. 25. Mechanism for loading cans into a series of open-end tubular cartons moving continuously in a predetermined path, said cartons having foldable can-locking tabs in the top and bottom walls thereof.

Automatic Carton-Packing Machine, Melvin B. Koch (to Animal Trap Co. of America, Lititz, Pa., a corporation of Pennsylvania). U.S. 2,900,773, Aug. 25. An automatic carton-packing machine comprising: carton-receiving means to receive a plurality of cartons to be filled and a package accumulator connected to said carton-receiving means to cyclically receive and accumulate in selected quantities packages of selected sizes to be packed into said cartons.

Bottle-Handling Machine, Carl A. Carlson, Dennis L. Pommer and Lyndon H. Reiten (to General Tool & Engineering, Inc., Minneapolis, a corporation of Minnesota). U.S. 2,900,775, Aug. 25. In combination, a conveyor carrying bottle cases, having bottle-receiving compartments successively passing a station.

Container-Packaging Device, Russell William Anness (to Diamond Gardner Corp., Middletown, O., a corporation of Ohio). U.S. 2,900,776, Aug. 25. In a container-packaging device, a pair of spaced-apart forming members defining an opening between them and means for feeding a carrier blank onto said forming members with its bottom wall overlying the opening between said forming members.

Tucking Mechanism for Packaging Machine, Ellsworth A. Hartbauer (to F. B. Redington Co., Bellwood Village, Ill., a corporation of Delaware). U.S. 2,900,778, August 25. In a packaging machine adapted to package articles in an expanded tuck-flap carton having four joined walls, side flaps extending from two opposed walls at opposite ends.

Carton-Expanding and Conveyor-Loading Mechanism, Harry E. Engleson and Elmer D. Sramek (to F. B. Redington Co., Bellwood Village, Ill., a corporation of Delaware). U.S. 2,900,880, Aug. 25. In a packaging machine having a conveyor movable about a rotatable end-support means, apparatus for expanding and inserting cartons into buckets carried by the conveyor.

Carton Feeder, Joseph Shuster (to General Foods Corp., White Plains, N.Y., a corporation of Delaware). U.S. 2,901,086, Aug. 25. In a carton feeder having a carton-receiving table, an upwardly

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inclined extension for said table and pusher means for moving the cartons across the table and up the extension.

Discardable or Re-usable Plastic Package, Earl S. Tupper (to Tupper Corp., North Smithfield, R.I., a corporation of Delaware). U.S. 2,901,098, Aug. 25. A shape-retaining, pressure-sensitive, hermetically sealed and deformable package including contents sealed therein, adapted for selective discarding or reusability as a frictionally sealable container and cover.

Packaged Metal Fasteners and Bonding Agent, Vernon K. Krieble (to The American Sealants Co., Hartford, a corporation of Connecticut). U.S. 2,901,099, Aug. 25. A package comprising an outer plastic container containing metal fasteners and an inner container formed of plastic, and containing an air space and an anaerobic uncured resin.

Box-Handling Device, Wilber C. Belk and Hans W. Grotewold (to Food Machinery & Chemical Corp., San José, Calif., a corporation of Delaware). U.S. 2,901,136, Aug. 25. A box-dumping device comprising a pivot drum about which boxes are rotated for dumping.

Dispensing Container with Friction-Mounted Cap, Jack F. Fralick (to Continental Can Co., Inc., New York, a corporation of New York). U.S. 2,901,142, Aug. 25. In a can structure, a body having a can end secured thereon by a seam, including an inwardly directed, upstanding and outwardly flared wall.

Carton, Oscar L. Vines (to Continental Paper Co., Ridgefield Park, N.J., a corporation of New Jersey). U.S. 2,901,155, Aug. 25. A collapsible, open-top carton formed from a rectangular carton blank initially provided with two side-wall panels of equal width.

Container Closure and Method of Forming Same, John Henchert (to Continental Can Co., Inc., New York, a corporation of New York). U.S. 2,901,161, Aug. 25. A container for food products, comprising a tapered fibre body having an open, outwardly flared end portion thereof turned back into intimate contact with the inner face of said flared end portion.

Spiral Container Tube, Charles L. Vallas (to The Cleveland Container Co., Cleveland, a corporation of Ohio). U.S. 2,901,162, Aug. 25. In a spirally wound, multi-ply container tube having at least a semi-rigid wall construction, two adjacent, independently flexible ply strips wound one upon the other and in the same direction.

Container-Filling Machine, Peter J. Bardy and Abraham Siegelman (to Armour Research Foundation of Illinois Institute of Technology, Chicago, a corporation of Illinois). U.S. 2,901,209, Aug. 25. In a mechanism to dispense material in accurately measured quantities, a support structure, a conveyor relatively movably carried on said support structure, a container carried by said conveyor, and means on said support structure to intermittently controllably drive said conveyor to move said conveyor successively to a series of stations along the path of movement.

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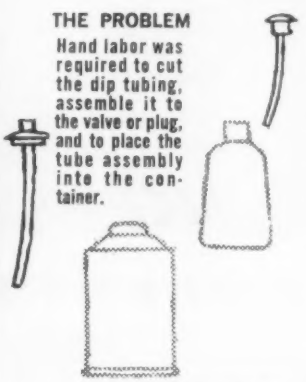

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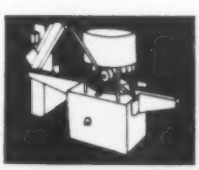

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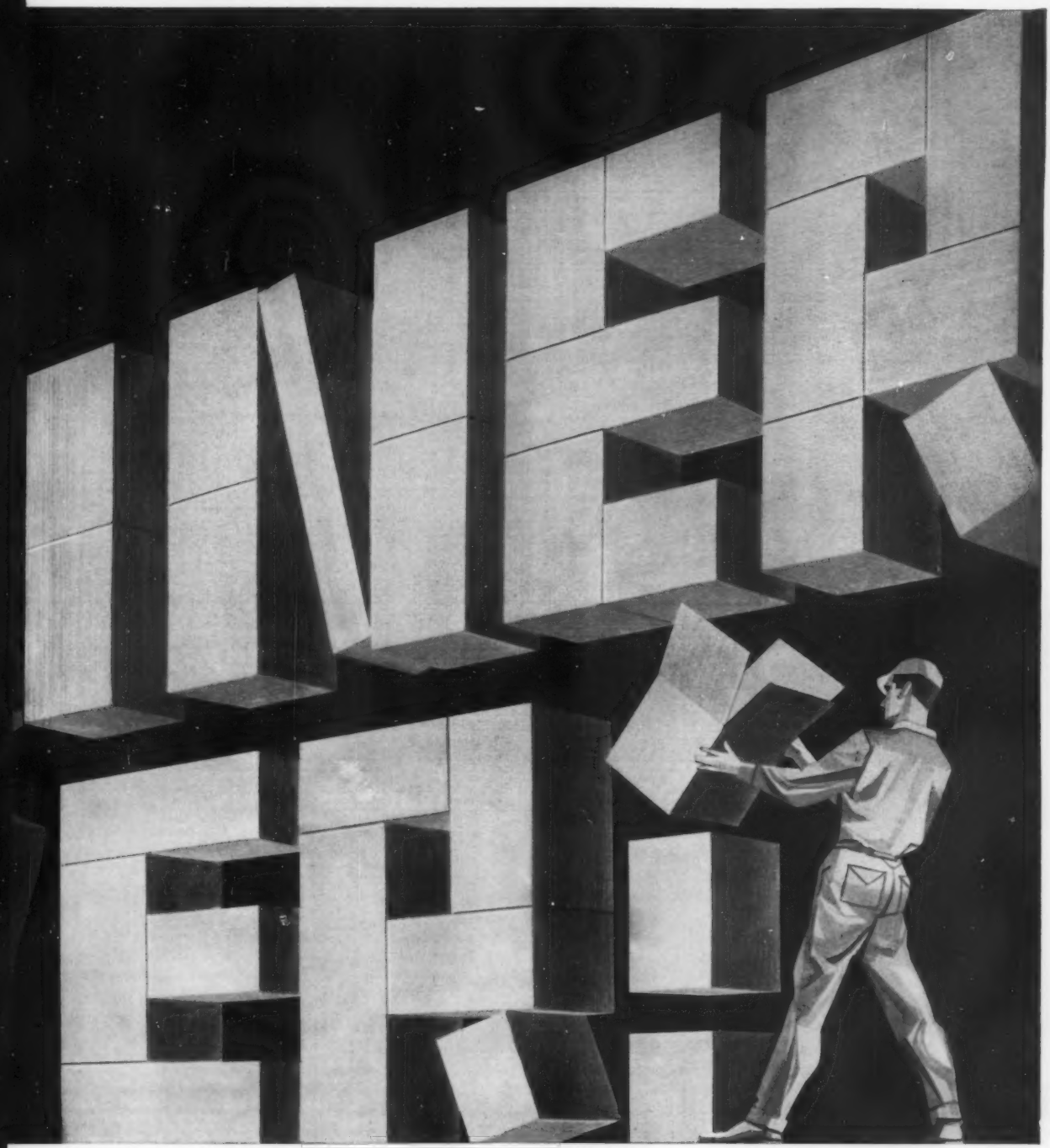

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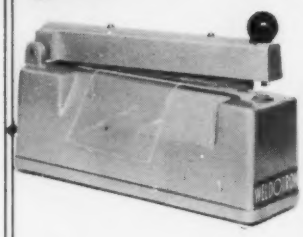

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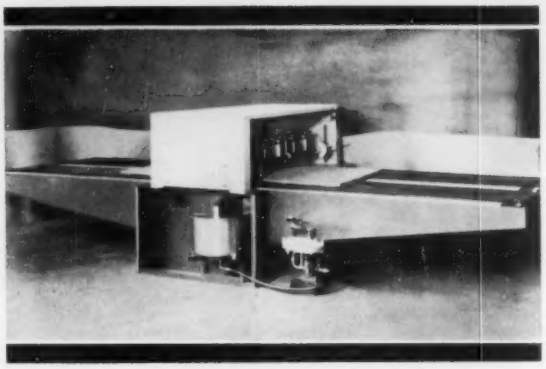

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'A' is for Abbott

[*Continued from page 174*]

new packaging. It is heparin, which has been given an Abbott brand name "Panheprin," because of its extensive Abbott dosage forms. Next to get the new look will be hospital solutions for intravenous feedings, burn therapy, etc.

Glass bottles used for packaging these solutions are being redesigned to include Abbott's new trademark molded into the shoulder. Their new labels are larger, of the new Abbott blue, more legible typographically and feature the "a" trademark symbol dominantly.

Other of the drug groups will be switched over at the rate of about one line every three to six months until all products are repackaged.

Naturally, Abbott wishes to get the weak ones out of circulation first. While problems of sterility, hospital procedures and other factors enter the picture, it is expected that entirely new packaging materials and production techniques will be instituted for some of the lines. Recommendations that will be made by Abbott's 15-man packaging subcommittee will be followed in this respect.

The breadth of the company's new packaging effort is demonstrated by the titles of the 15 men who comprise this subcommittee.

Director of packaging
Advertising manager
Advertising production manager
Manager, pricing department
Associate director of sales
Sales coordinator
Director of new products
Head of special projects department
Superintendent of materials and production control
Medical director
Director of medical science projects
Head of pharmaceutical research
Director of scientific administration
Member of department of scientific administration
Director of clinical research

In the past Abbott has pioneered uses for new packaging materials and containers. For example, the white polystyrene cap of the Sucaryl bottle (the bottle was chosen by the New York Museum of Modern Art for its current packaging exhibit, "The Package," see this issue, page 158) required creation of a radically new molding technique to produce the graceful curve of this closure. Abbott's packaging restlessness will continue. In fact, it is probable that basic changes will be even more frequent now that management's spotlight is directed at packaging improvement. Reportedly, several promising developments are now on the drawing boards.

But Abbott isn't working for an overnight metamorphosis. It considers the gradual line-by-line change advantageous in the medical field, which—for all its much-publicized drama—must be essentially conservative in its packaging.

Abbott's packaging objective is long term. The company anticipates that change-over of the entire product line may take nearly 10 years and will actually never be completed in view of the constant stream of new offerings. But its packaging plan and the new trademark, to which Abbott is firmly committed, provide a basic structure within which packaging advances may be incorporated without loss of brand identity. ●

Baked goods stay fresher . . . IN THIS COMPLETE PACKAGE!

Foil pan, plastic cover—a complete package with a long list of sales, shelf-life and production advantages to help you boost your profits.

This new combination gives full product visibility . . . makes an eye-catching display of every item. It protects even the most delicate baked goods and keeps them fresher, too.

And you still get all of the production advantages of foil containers . . . no product transfers . . . no cripples . . . no pans to burn in, grease, wash or dry.

What a package—production savings, full visibility, longer shelf life. And it's sturdy, easy to stack . . . you can double up in the showcase or make a traffic-stopping display pyramid on top of the counter. Why not take advantage of foil. Write for a free catalog today . . . or better yet . . . call your Ekco-Alcoa distributor right now.

The Plus Container

EKCO-ALCOA CONTAINERS INC.

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EKCO is the registered trademark of Ekco Products Company, ALCOA is the registered trademark of Aluminum Company of America. The corporate name and combination mark, EKCO-ALCOA, is used under license to the manufacturer by each of these companies.

Frankfurters and beer go well together. However, ball bearings and tobacco or sausage and candy are strange partners. But, all of these products — along with hundreds of others — have at least one thing in common — they're all packaged by Crompton & Knowles Packaging equipment.

Yes, today in hundreds upon hundreds of food, beverage and industrial plants, Crompton & Knowles automatic packing and wrapping equipment plays a vital role in production operations. In one plant you might see a Model CKDW-4 automatically wrapping popcorn bricks; in another plant a CKF is wrapping frankfurters as fast as girls can feed the franks into the line; in still a third plant a Crompton & Knowles line of can and case handling equipment is packing beer cans in cases and sealing the cases.

No matter where you go on the American industrial scene you'll find Crompton & Knowles packaging applications. The companies represented here are both large and small and represent an interesting cross-section of industry. They've all learned that Crompton & Knowles Packaging Corp. is a key source of supply. They've learned especially, that Crompton & Knowles equipment is *dependable equipment*, with *efficient servicing* as near as the telephone.

Find out now how Crompton & Knowles can serve you — how Crompton & Knowles equipment can help solve your automatic wrapping and packing problems. Contact your nearest Crompton & Knowles field engineer or write directly to Holyoke.

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C&K
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DIAMOND-GARDNER CORPORATION (Foodtainer-Plate Division)
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THE FAFNIR BEARING COMPANY
GEORGE W. HELME COMPANY
GEO. A. HORMEL & CO.
HYGRADE FOOD PRODUCTS CORPORATION
INTERCHEMICAL CORPORATION (A & W Carbon & Ribbon Division)
KEYES FIBRE COMPANY
THE KROGER CO.
LUDEN'S INCORPORATED
MARLIN-ROCKWELL CORPORATION
MINNESOTA MINING AND MANUFACTURING COMPANY
MOBIL OIL COMPANY, INC.
PESCHKE SAUSAGE CO., INC.
THE PROCTOR & GAMBLE COMPANY
SANITARY PRODUCTS CORP. OF AMERICA
MISS SAYLOR'S CHOCOLATES INC.
JOS. SCHLITZ BREWING COMPANY
SOLO CUP COMPANY
SUTHERLAND PAPER COMPANY
THE TORRINGTON COMPANY
WHITE CLOVER DAIRY COMPANY, INC.

C & K Packaging can help you—find out how. Your nearby C & K field engineer is as close as your telephone. Or contact us at Holyoke.

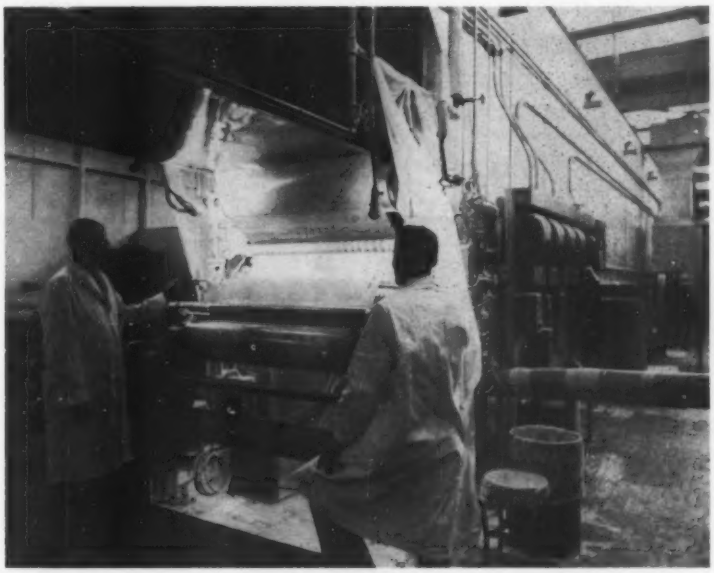
CROMPTON & KNOWLES C&K PACKAGING CORPORATION

Holyoke, Massachusetts

Be sure to visit us at the PMMI show Nov. 17-20 at the New York Coliseum Booths 1019 through 1023

New cast-film plant on stream in Virginia

Reynolds Metals Co.'s new plastic-film plant at Grottoes, Va., unveiled last month, has just swung into full-stream production of plastic films by casting processes for a variety of uses ranging from household wrap to water-soluble plastic packets for detergents.



Finished film rolls off casting machine at Reynolds' new Grottoes, Va., plant.

The plant, which employs about 200 persons, is now making a full line of polyvinyl chloride (PVC) and polyvinyl alcohol (PVA) films under the Reynolds' plastics trade name, "Reynolon." The PVC film is acceptable for food applications under F&DA rules, according to the company.

In addition to films for packaging, industrial and consumer applications, the "Reynolon" line includes a new, crystal-clear PVC household wrap which is being introduced in the first markets this fall. It is said to have exceptional protective and "cling" properties. A similar film, said to be readily machinable, is produced in half-mil gauge for economical packaging use.

The Grottoes plant was purchased from Duplan, Inc., by Reynolds in 1956 when it became apparent that Reynolds' growing plastics operation needed room to expand. With acquisition of the facility, Reynolds' plastics division was moved from its crowded quarters in Gary, Ind.

The plant's 124,000 sq. ft. of floor space provided ample room for the present expansion program which has just been completed. The automatically controlled plant is now one of the most up to date in the industry. It includes unique equipment to recover 95% of the solvents used. The facility's 63-acre site will make possible future expansion. ●

TAPPI session on Food Additives Amendment

The packaging field as a whole may have been slow to recognize the significance of the new Food Additives Amendment, but it is now galloping to catch up (see "The Food & Drug Crisis: How Now?" this issue, p. 134). All traces of complacency were gone as a capacity audience turned out for the latest F&DA panel discussion at the Technical Assn. of the Pulp & Paper Industry's recent Chicago plastics-paper conference.

If listeners hoped for an easing of the tension, they were disappointed. Representing the food packagers, Dr. Lucius W. Elder of General Foods Corp.'s Tarrytown, N.Y., research center, stated flatly that "without the application of new chemical products to established packaging materials, food packers can't continue to bring out new products."

Dr. Elder summed up the user's

[*Continued on page 242*]

NASHUA ANNOUNCES IN EASY-OPEN

MAJOR BREAK-THROUGH BOX TAPES...

New Peelac* Peelable Tape makes possible a truly easy-opening carton.

Here's BIG news for shippers!

It's Nashua's new Peelac Peelable Tape... a tape that lets you package in an easy-opening carton...

Here's the story...

You cut down product spoilage! No knives or other sharp openers needed. An easy pull...and Peelac strips off clean. Fast, easy opening...no damage to contents.

You get economy! New Peelac obsoletes costly, clay-filled fabric peel-tapes, pull-tab inserts, similar opening devices.

You get modern design flexibility! New Peelac Tape permits a wide variety of different designs for your cartons—obsoletes costly, clumsy carton opening devices.

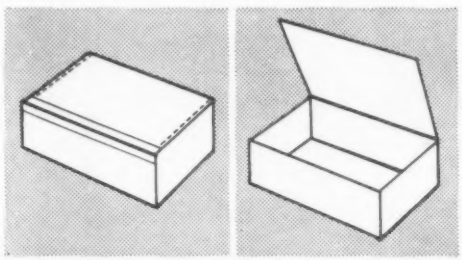
You get better display at point of sale! New Peelac-taped cartons lend themselves to "as-is" display...tray-type shelf display ...easy price stamping.

New Nashua Peelac Peelable Tape is ready to go to work for *you* right now! Call in your box maker. Or use the coupon for prompt, complete information.

Act today!

**Trade-mark*

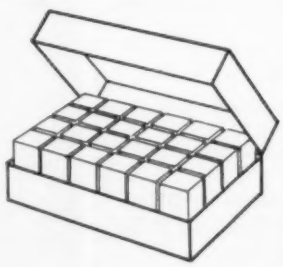
NASHUA Corporation



"Up-top" manufacturers joint, another easy-open closure made possible by Peelac, provides lid-like opening for cartons. Versatile Peelac Tape meets wide variety of packaging and product needs... modernizes your shipping containers!

Manufacturers joint formed "up front" with new Nashua Peelac Peelable Tape!

The carton opens like a suitcase for neat display, easy price stamping. No knife. No damaged products or package!



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Send full information on Peelac Peelable Tape and how it can improve my packaging.

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When you want "as specified" custom designed cellophane and polyethylene bags . . .

When you want "as specified" printed and converted polyethylene film, sheet, tubing, lay flat and gusseted . . .

It *pays* to deal with Keystone Packaging Service! Keystone is a stickler for accuracy. Write or call today for quotations, free bag and roll stock samples. *And design consultation.* Keystone Packaging Service, 555 Warren St., Phillipsburg, N. J.

KEYSTONE
flexible packaging

KEYSTONE PACKAGING SERVICE
555 Warren St., Phillipsburg, N. J.

[*Continued from page 239*]

attitude on responsibility for compliance when he pointed out that packagers must look to suppliers (either raw material or converter) for information on: potentially harmful additives, the extent of their migration and acceptable alternate materials.

Dr. Elder felt that users of packaging materials would be justified in footing the bill for necessary research and F&DA petitions only when extractability tests show less-than-borderline contamination and there is no alternate packaging material that would do as good a job. ●

Variety-store winners

Award winners in the *Variety Store Merchandiser's* 23rd Annual Packaging Competition have been selected from the more than 1,100 entries submitted—an all-time record in the event's history. Presentation of 10 Gold and 48 Silver Awards will be made to representatives of the various company winners at the Annual Variety Industry & Awards Dinner, to be held at the Waldorf-Astoria on Nov. 10, at which time the "Best Package of the Year" Award will be announced.

Following are the Gold Award winners in the 11 classifications:

Cosmetic and Toilet Goods: Dura-Gloss Lipstick, Dura-Gloss Div. of Ar. Winarick, Inc.

Toys and Games: Betsy McCall Designers Studio, American Miniature Doll Corp.

Household and Housewares: Stainless Steel Tableware (48 piece—Swirl design), International Silver Co.

Hardware, Paint and Electrics: Sixty-Second Lamp Kit, W. N. de Sherbinin Products, Inc.

Horticulture: Jiffy Planter, Union Wadding Co.

Notions and Allied Lines: Serena Sanitary Napkins and Sanitary Belts, Personal Products Corp.

Ready-to-Wear: Men's Handkerchiefs in Lapel Suit Box, Handcraft Mfg. Co.

Cosmetics and Other Soft Goods: Chix Dude Fitted Crib Sheets, Chicopee Mills, Inc.

Stationery: Papermate "98," Mark III and Holiday Pens, Paper Mate, Div. of Gillette Mfg. Co.

Miscellaneous: "Carillon Spire" Tree Top, Bradford Novelty Co. ●

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BOTTLE
8-Ounces

Glass and Plastic Bottles and Caps

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Research center opens

Research projects on tobacco, paper, packaging, adhesives and textiles will be conducted at a multimillion-dollar research center which has just been opened by Philip Morris, Inc. Located in Richmond, Va., the new center is staffed with 150 research and technical personnel. It comprises five buildings fully equipped with advanced scientific and technological equipment.

The new research facility was formally dedicated on Sept. 30 by the company's president, Joseph F. Cullman, III. Speaking at the dedication ceremonies, Dr. Robert N. DuPuis, vice president and director of research, said that "the concept of an advanced corporate research center like this has special importance to a tobacco company such as Philip Morris which has diversified into other areas." Among the Philip Morris subsidiaries in the packaging field are Milprint, Inc. (flexible packaging) and Polymer Industries (packaging adhesives).

Previous research by the company led to chemical and engineering developments which made possible the flip-top box, the snap-open pack and other advances in the packaging of cigarettes. ●

Polypropylene gains

Two new facilities for the production of polypropylene—one in the East and the other on the West Coast—have been announced. The AviSun Corp.'s new 20-million-pound-per-year unit at Port Reading, N. J., has gone on stream. The Dow Chemical Co. has announced that plant facilities for producing polypropylene will be built at one of several West Coast sites under consideration and that when the plant goes on stream in 1961, it will have "sufficient polypropylene production capacity to supply estimated West Coast requirements."

The Port Reading polymer unit, according to AviSun, uses a process which results in production of highly isotactic and crystalline polypropylene. Initially, two commercial grades will be offered: a general-purpose grade for injection molders and one for extrusion of monofilaments and fibres. The polypropylene is now available in pellet form in 50-lb. bags. Further information on the

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a NEW dimension in Converting Profits!

These are the machines being used by your competition... making it possible for them to get a better share of your market. Don't wait any longer! Check with a Potdevin man at once. He will help you get the maximum share of your potential market.

You are assured that from the smallest coater to a giant multiwall bag making machine... each is engineered to save time and material. The instant a Potdevin starts to roll, it's clicking off a marketable product. This is truly a NEW DIMENSION in CONVERTING PROFITS.

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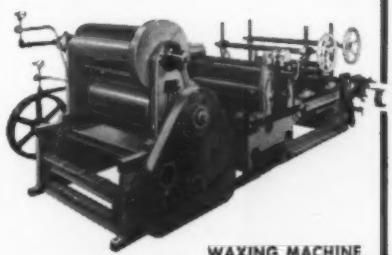
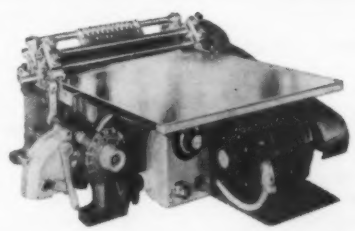


WAXING MACHINE

STRIP-GLUER and DRYER



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SPECIALTY BAG MAKING MACHINE

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Submit samples of your product to our Development Department. They will attempt to supply a solution to your coating, laminating, bag making or labeling problems.

Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling

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The Best In

Blister Packaging

Low Initial Cost . . . High Production Output

TRONOMATIC blister sealers—ranging from smaller units to fully automated turntable machines—point the way to expanded sales volume with modern blister packaging. Seal any blister to a coated card for maximum product protection, seeability and sales. Every day, a greater percentage of blister packages are being produced on industry-tested TRONOMATIC equipment.

TRIM PROFITABLY . . .

with unlimited cutting lengths of plastics or similar materials with TRONOMATIC Air-Hydraulic Heat-Assist Die Cutting Presses. TRONOMATIC can supply all your cutting die needs.

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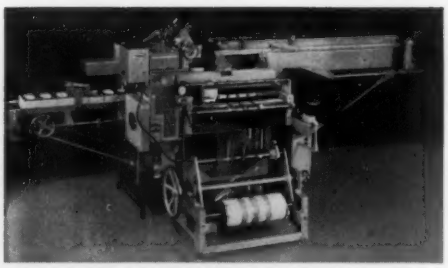
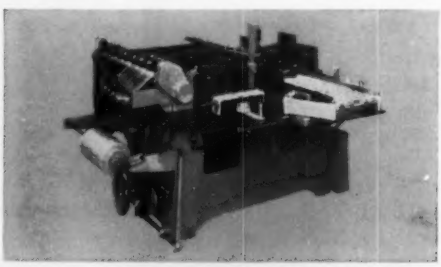


NOW YOU CAN HAVE TOMORROW'S OVER-WRAPPING MACHINE TODAY! Battle Creek's completely new Model 475 successfully handles more than 40 different formulations of soft plastic film . . . your assurance new plastic film developments will not outdate this machine. Change of films requires only electronic heat adjustment. Size changes are made in 15 minutes. Wraps up to 75 per minute within 5″ to 12″ lengths, 3″ to 8½″ widths and ¼″ to 4″ heights. Choose any of these films — polyethylene (medium, low and high density 1 mil and up), polystyrenes, heat sealing cellulose acetates, heat sealing foils, polyvinyl chlorides, cellophanes, polypropylenes or polymer coated films. **Battle Creek *"Continuous Flow"* Packaging Machines, Inc., Battle Creek, Michigan.**



REDUCE COSTS . . . PROTECT PRODUCTS . . . IMPROVE DISPLAYS . . . PROMOTE MULTIPLE SALES with Battle Creek's new Model 850 Automatic Bundler. This machine bundles groups of packages . . . 4, 6, 8, 12 and 24 to a bundle . . . at speeds up to 18 per minute. One operator can easily keep pace with a packaging line as high as 180 per minute. Depending on construction selected, the machine bundles with kraft paper, polyethylene, cellophane and other films; in bundles within 5″ to 12″ long, 4″ to 10″ wide and 1″ to 8″ high. Used for textiles, paper items, drugs, chemicals, cosmetics, food products . . . and/or what have you? **Battle Creek *"Continuous Flow"* Packaging Machines, Inc., Battle Creek, Michigan.**

material is available from E. N. Irish, product manager—polymers, AviSun Corp., 1608 Walnut St., Philadelphia 3.

Dow's projected West Coast polypropylene facilities are in addition to the company's Bay City, Mich., production which is scheduled for completion early next year. ●

Resurgence in—

[*Continued from page 129*]

packages per minute in actual production runs (Scandia). The roll-fed wrap, which hangs in front of the product conveyor, is picked up, folded and sealed in a single, horizontal motion of the boat-packed product without the use of reciprocating elevators. If this type of mechanical action is adapted to larger packages, a major breakthrough in overwrapping of general products may well be accomplished.

To supply the growing need for machinery capable of handling complex package constructions and unusual product and premium combinations, machinery men have frequently had to turn their backs on streamlined high-speed mechanisms and devise equipment capable of surpassing the intricate dexterity found in a pair of human hands.

That they have met this challenge is evident in every phase of packaging machinery from cartoners to taping equipment. Although it is a general rule that flexibility of adjustment and operation does reduce speed, it has not always been necessary to reduce packaging rates in such versatile equipment.

A prime target of flexible mechanical development has been the multi-packaging field, where techniques have been steadily broadened from handling a limited number of cans to the point where virtually any kind of primary product container can be combined automatically in multiple sizes or with premiums of diverse types. New designs of this equipment are expected to invade the bottled soft-drink and beer fields next, with throw-away carriers that will simplify packaging in these operations. And machines are now in the formative stage for multi-unit packages made from lighter-weight paperboard, paper and plastics.

Concern for the small packager

[*Continued on page 249*]

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Post's Miniature Photo-heads solve the problem of mounting a sensing device in a limited area. Hardly larger than a standard paper clip, these photosensitive, semi-conductors may also be used as a reflected beam photohead.

Average light source life is 5,000 hours . . . designed for industrial use. Alignment brackets to insure proper relation of light source and receiver are also available.

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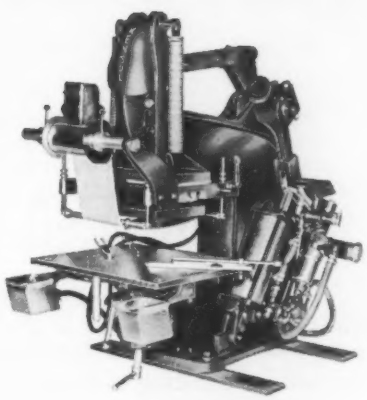
Kensol Presses are available in three pressure ranges: Light-Weight, Medium-Weight, and Heavy-Duty.

The proper model is available to meet any production requirements: Hand-operated, Air-operated, Semi-Automatic & Completely-Automatic.

Compressed air operation adjustable electric dwell-timer, thermostatic heat control and rugged construction are a few of the features which assure fine quality marking.



KENSOL 36T
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Fine quality, economically priced roll leaf in genuine gold, imitation gold and silver, and both flat and Enamel pigment colors.

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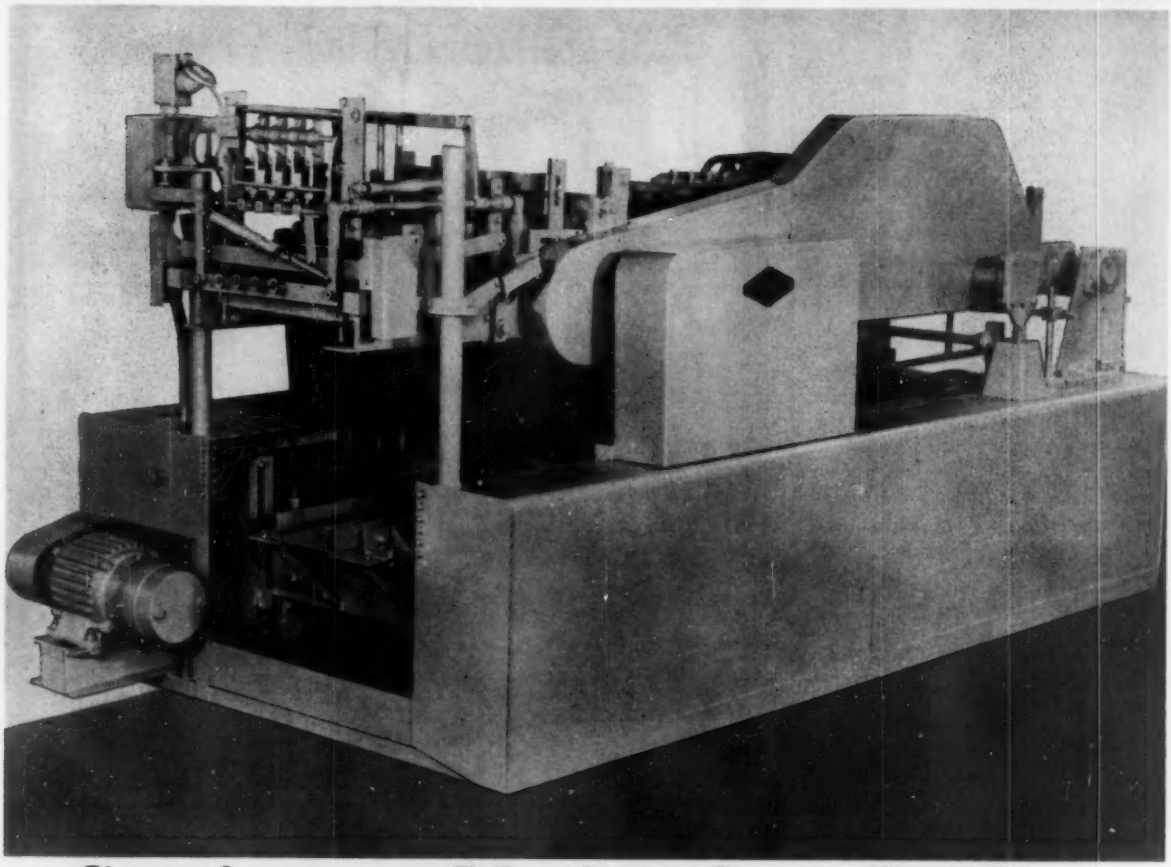
NEW!... from ATKRON DUMORE



Continuous Motion Case Packer

Interchangeable heads pack all bottles or cans in single or multiple layer cases!

- FAST—Packs up to 30 cases per minute
- NO COMPRESSED air required
- POSITIVE PACKING CONTROL—Any irregularity in supply of bottles, cans or cases automatically delays packing drop until corrected by machine itself or operator
- SIMPLE OPERATION—Requires only casual attention of one man
- COMPACT—Small space requirements compared to machine capacity . . . 4'9" by 10'4" in conveyor layout
- ELIMINATES bottle or label scuffing
- EASY CHANGEOVER for different bottles or cans (sizes and packs) can be accomplished in only 20 minutes
- ADAPTABLE TO PLANT LAYOUT—Fits all standard conveyors at standard conveyor heights
- LOW INITIAL COST and minimum maintenance

to cut your uncasing costs . . .

ATKRON DUMORE FULL RANGE HALF DEPTH BOTTLE UNCASER

. . . Automatically uncase, align and orient new cans ready for filling
. . . Adaptable for cans received in reshipper cartons, shipper trays, bags or bulk
. . . Speeds up to 1200 cans per minute with casual attention of only one man
. . . Models to handle all standard cans—6 oz. to 5 quart, cone top, screw cap and pressurized cans; rectangular, square and most specialty can styles.

Check other ATKRON DUMORE Equipment: Full depth and half depth Uncasers, and Four Flap Case Openers. Write for complete information . . . it can easily make the difference between profit and loss in your plant.

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Feel the smooth-as-glass Glamakote® finish!

Beautiful printing . . . glamorous finish—that's Hi-Fi Glamakote by Marathon! Like a tempting dish with a tasty topping!

Your packaged products will stand high in the public eye when you call on Marathon's ability and facilities. Printing by offset, rotogravure, letterpress or flexographic processes on paper, paperboard, films or foil. Laminations of all kinds and many combinations of coatings can be used to add protection, heat-sealing ability and point-of-purchase pickup appeal to your packages.

Ask the Man from Marathon for samples covering every phase of packaging. Or write: Marathon, Dept. 722, A Division of American Can Company, Menasha, Wisconsin. In Canada: Marathon Packages Limited, 100 Sterling Road, Toronto 3.

for packaging . . .
and ideas . . .
you can't beat

marathon

Printed 4-color offset on Marathon .012 Hi-Fi paperboard with Glamakote finish.

[*Continued from page 245*]

of specialty food products has led to recent development of new slow-speed labelers that can handle almost any shape of label and apply it to virtually any shape or size of jar or bottle (MRM, Phin). Newest designs will broaden this versatility even further, since competition has forced packagers to employ increasingly complex and unusual glass container and label shapes.

Likewise, decoration of plastic containers has kept pace with the container field. A heat-transfer technique for inked designs, which two years ago could be applied only to flat film, has recently progressed to oval and round plastic bottles (Dennison). Now experimental machines show promise of broadening this low-cost method of decoration even further to glass, tin and sharply angled plastic surfaces.

Behind the prototype models and actual commercial machines described here, there are ideas, "why don't they?" comments from packagers and "could we try?" suggestions from applications engineers that spark new packaging techniques and improved machinery. Beer packagers are now talking about bottling and canning speeds of 1,000 per minute; other packagers are considering how they can make folding cartons from roll-fed paperboard, foil or plastic sheet. Mechanical engineers are tinkering with the idea of efficient linear motors to simplify reciprocating motion and wondering how they can make featherweight machine frames with the rigidity and strength of heavy cast bases.

So far, these and many other improvements in packaging machinery are simply ideas which have not yet been translated into metal and moving parts. But with the present accent on development in machinery, they won't be long in coming. ●

The Food & Drug crisis: how now?

[*Continued from page 138*]

that the number of intentional and unintentional food additives will probably greatly exceed the 704 total cited in the original Congressional hearings on the proposed law.

Thus, Food & Drug has belatedly moved to speed clearances of individual chemicals that may be encountered either in foods or packaging materials by circulating to 800 "qualified experts" the list of compounds that F&DA feels may be safe. Identity and affiliation of these experts who will submit opinions on the safety of these modern compounds is closely guarded by F&DA.

The first two series of chemicals, totaling 370 additives, contain "virtually no chemicals used in packaging materials," according to Mr. Checchi. But he adds that F&DA intends to circulate soon a new list for approval that will contain many chemicals used in packaging, including many of those cited for packaging use in 1955 by Dr. Arnold J. Lehman, director of F&DA's Pharmacology Division.[4]

The first two lists covered food additives declared safe by the F&DA "when used for the purposes indicated." A list of 188 buffers, neutralizing agents, preservatives, non-nutritive sweeteners, nutrients, stabilizers, emulsifying agents and surfactants was published in the Federal Register, Dec. 9, 1958. A second list of 182 natural seasonings and flavorings, essential oils, oleoresins and natural extractives appeared April 21, 1959. If packagers are interested, copies of the pertinent issues of the Federal Register may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

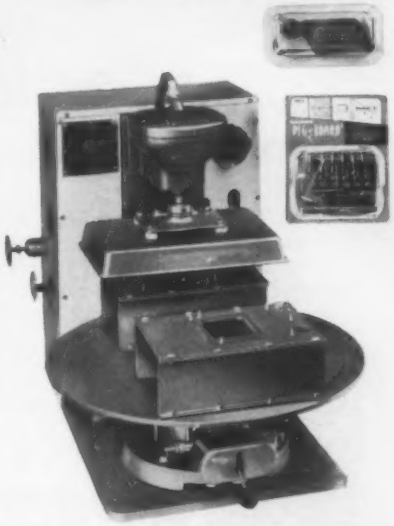
Since the lists put out by F&DA have been circulating for several months and the final results have not yet been compiled for publishing in the *Federal Register*, packagers may not get much immediate benefit from this program. But the move does mark an important step by F&DA—outside the letter of the food additives law—to cooperate with industry. And it may be of great future aid to a large number of packagers and suppliers.

Veteran packaging men who have been practically living in Washington for the past months working on this problem report that F&DA's outward moves to clear up the status of packaging chemicals are not the only evidence of a new attitude on

[4] See "F&DA Acceptance Criteria," MODERN PACKAGING, Jan., 1955, p. 115.

New, low cost BUBBLE SEALER

1 package every 3 seconds



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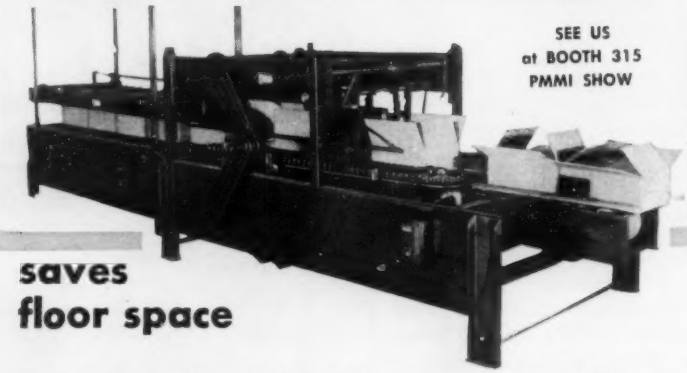
A-B-C Short Case Sealer



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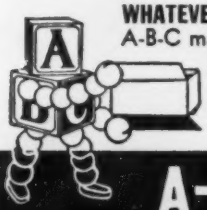

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the part of that agency's officials.

Though no official pronouncements have been made—or should be expected—recent speeches by key F&DA administrative and research men and their private conversations with packagers and suppliers reflect increasing awareness of the tremendous problems that face both the packaging field and F&DA in administering the new law. They detect a noticeable willingness to bend slightly where the public health is not obviously endangered. Though this attitude can have no effect on basic enforcement of the law—which has been clearly spelled out by Congress—it is expected to influence F&DA's interpretations, which, according to many packaging executives, were initially so tough as to be unworkable.

If this improvement continues and F&DA relaxes its demands on development of specialized tests for migrants in foods, on minimum level of toxicological significance and on acceptance of standard packaging materials in long use by the food-packaging industry, even small packagers may be able to live with the new law. ●

Polyethylene prices

A reduction of 3 cents per pound in the price of certain types of its Marlex rigid polyethylene has been announced by Phillips Chemical Co., a subsidiary of Phillips Petroleum Co., Bartlesville, Okla. The price change from 38 to 35 cents a pound for this linear or high-density polyethylene affects the resins which are used in the production of clear overwrap film and in injection-molded products. Three other companies are reported to be joining Phillips in the price reduction: W. R. Grace & Co., Celanese Corp. of America and the Koppers Co.

Phillips has also announced the availability of four new Marlex tailored resins, including one for the production of heavy-duty film. ●

Aerosol extension

A long, slim polyethylene extension tube that fits snugly into a special valve head permits precise dispensing of Chemtronics' "Tun-O-Lube" aerosol cleaning solution into relatively inaccessible television tuners and other small electronic compo-

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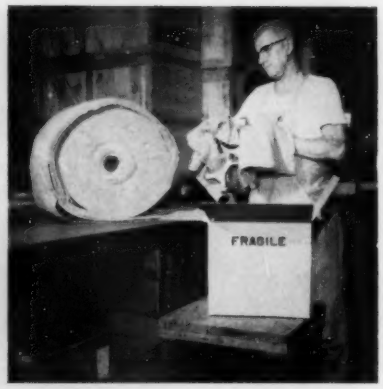

A cleaner, faster operation resulted as International Equipment Co., Boston, switched from excelsior (left) to Cel-Fibe wadding (right) to wrap motors, parts, test tubes, and dynamically balanced instruments in its line of precision centrifuges for laboratory uses.

CEL-FIBE® protective packaging doubles output, increases safety

"Cel-Fibe cellulose wadding is the best packaging material we have ever used," says C. Clifford Hodge, production coordinator for International Equipment, leading supplier of laboratory centrifuges, citing these improvements:

Savings in time, labor. An operator packs double the amount—Cel-Fibe wrapping takes only half as long.

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nents. The flexible tube is supplied free with each purchase of an 8-oz. can of the product.

SUPPLIES AND SERVICES: Tube by Anchor Plastics, Long Island City, N.Y. ●

Film-clarity meter

[*Continued from page 182*]

packaging situations, this meter should be of great value in rating packaging films for clarity.

This study has shown that clarity evaluations of films to be used for the two different uses of window glazing and overwrapping packages cannot be done by a single instrument. Neither can any one visual test, no matter how well designed, produce a single set of ratings for a variety of films destined for both distant-view and direct overwrap applications. It is recommended that a complete specification of clarity for a film consist of *two* values, one related to the overwrap situation and the other related to distance viewing. The ranking of a set of films under one condition will often be different from that under the other. Visual evaluation of the overwrap clarity of packaging films needs to be studied as thoroughly as has evaluation for viewing distant objects.

Acknowledgments

The authors wish to thank Dr. J. A. Van den Akker of the Institute of Paper Chemistry for helpful advice and Dr. A. C. Webber of E. I. du Pont de Nemours & Co., Inc., for the use of optical data determined in his laboratory and reported in Reference 3.

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Gallon and Quart bottles courtesy of Vanguard Plastics, Inc., Freehold, N. J.

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Thud! No crash, splatter, splash! But just plain thud! This bottle resists breakage because it's made of SUPER DYLAN® high density polyethylene. The gallon size weighs only 3½ ounces, yet it protects its contents . . . and the user, too! It's the bottle with the built-in bounce!

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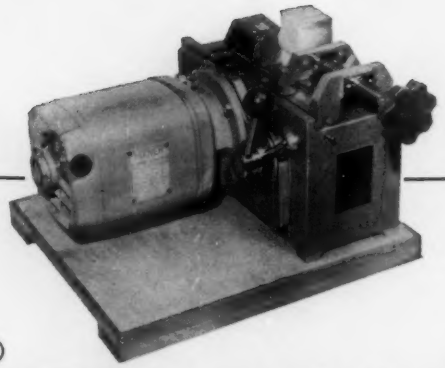

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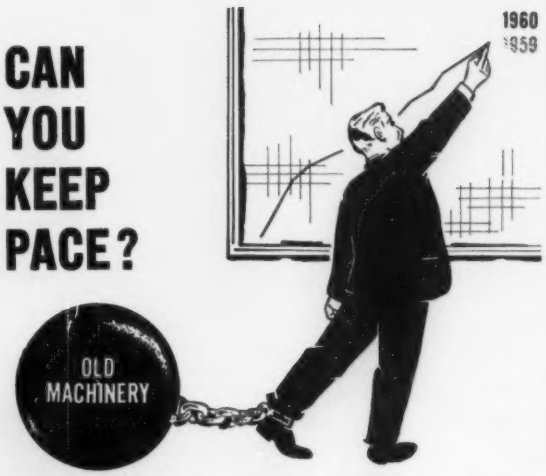

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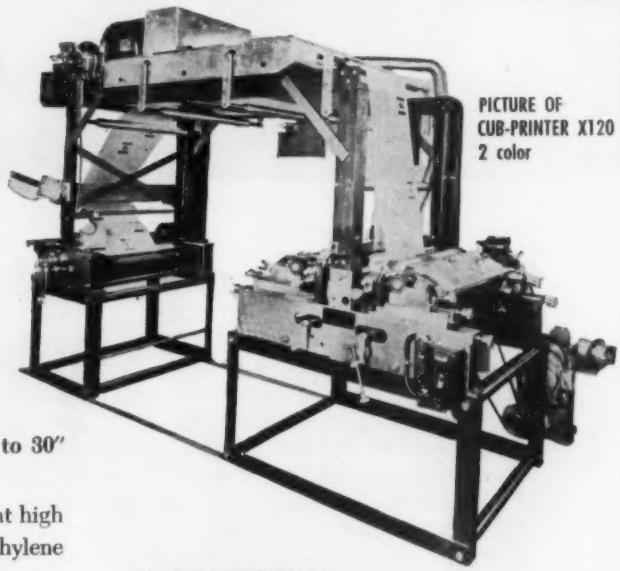

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83% lighter in plastic

[*Continued from page 133*]

problem with ingenuity—obtaining a shipper made from white-faced corrugated suitable for high-quality reproduction of the "color-code" symbols and copy used on consumer packages to identify Breck's three different types of shampoo. The bottle is held in place by a corrugated platform that, in turn, is locked in position by three short flaps on top of the carton. These flaps have shoulders that fit into die-cut slots in the platform. Neck of the bottle protrudes through a die-cut hole in the platform. This combination of anchoring techniques prevents any shifting and secures the bottle when tipped for pouring.

At the point where the full top flap is attached to the carton, the corrugated board in the side of the container is perforated, enabling the entire main top flap to be removed to permit dispensing. Then, the short flap on the front of the carton, containing two die-cut finger holes, is pulled upright to create a handle. These die-cut holes serve double duty, since in the folded position they secure the caps of two 8-oz. glass bottles of other Breck shampoos which are nested on top of the platform and are always included in the package as a premium for hairdressers. In transit, these bottles are further held in place with short strips of corrugated board inserted in the carton.

A molded polyethylene pour spout, equipped with a ring that snaps over a retaining lug blown in the neck of the bottle below the cap threads, guides the stream of shampoo and enables it to clear the side of the carton when tipped in use.

With only a few modifications in standard filling equipment, the plastic bottles are reportedly handled with as much ease as glass containers on the production line. Because the flexible walls in the polyethylene bottle would collapse during vacuum filling, Breck's semi-automatic unit was converted to a gravity system with standard rotary nozzles added to the filler spouts. An overflow return line relieves back pressure. Since the light bottles are not stiff enough to trip the filling valves, steel frames of the proper height were added to the reciprocating filling table to do this job. ●

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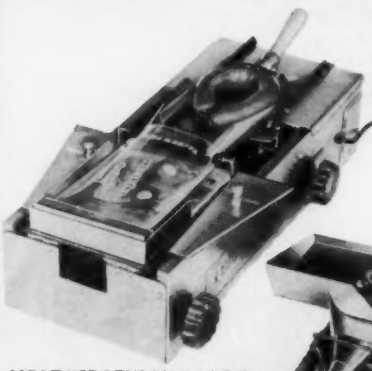
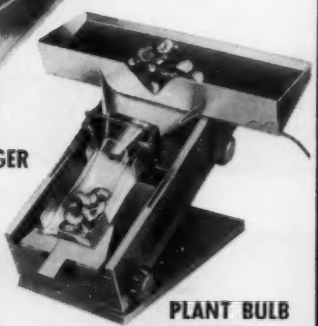
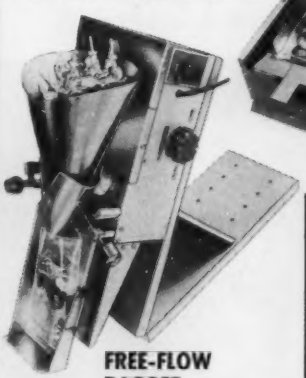


MEAT "SPATULA" BAGGER



PLANT BULB BAGGER



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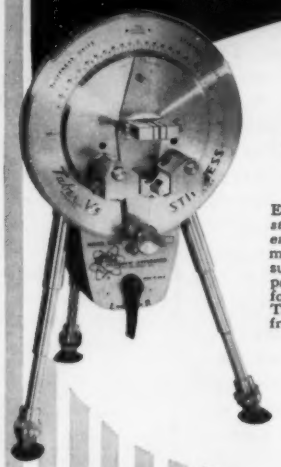

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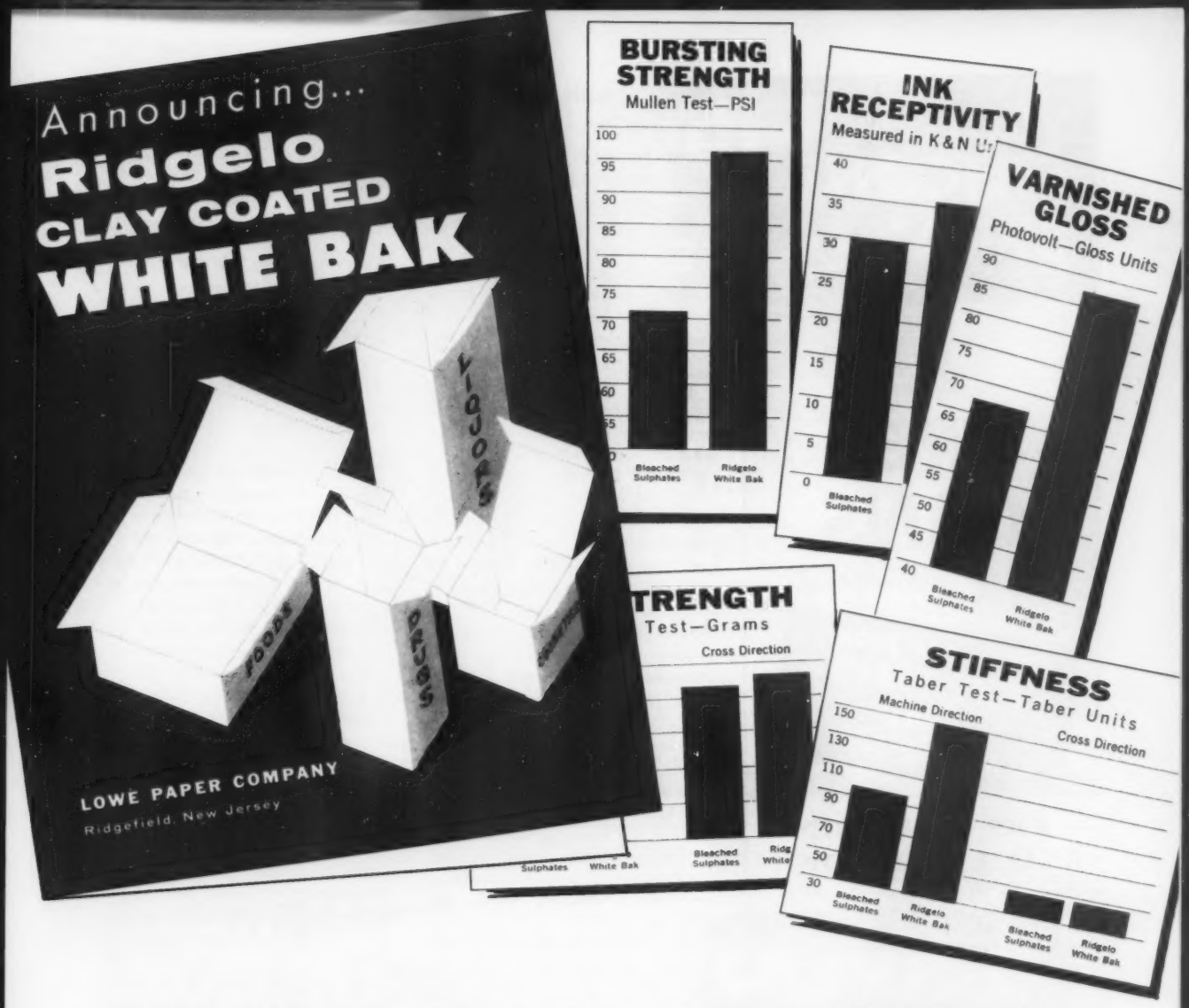

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Machinability of polypropylene film

[*Continued from page 188*]

vealed no single property which would prevent commercial use of the film on automatic machinery. On the contrary, some properties contribute to superior machine performance.

To give operating data for each machine and to recommend specific machine adjustments and heater temperatures would be beyond the scope of this article, since each type of machine calls for its own set of operating conditions. However, it is possible to discuss general characteristics of film handling and sealing.

AviSun's polypropylene film heat seals well at temperatures usually ranging from 350 to 425 deg. F., depending on the type of machine, speed and machine adjustments. On overwrap machines, tack seals as strong as cellophane seals and weld seals as strong as the film itself are possible. On one machine, overwrapping a soft paper product, strong tack seals were obtained at from 320 to 340 deg. F., with good weld seals accomplished at from 340 to 495 deg. F. The film thickness for this test was 1.25 mils and the type of fold produced a variation of one to five layers in the seal area. Overwrapping bread with 0.9-mil film produced a heat-seal range of from 345 to 365 deg. F. for the bottom seal.

We produced excellent side-weld bags in our laboratory from 1-mil film at 60 per minute within a temperature range of 420 to 500 deg. F. Then the machine speed was increased to 76 per minute, its maximum, with excellent seals and cut-off continuing. The seals were exceptionally strong, with no degradation of the film in the seal area. On only one bag-machine test did we find that heat-sealing temperature control was somewhat narrow. The widest range permissible was about 15 to 20 deg. F. On form-fill-seal machines, polypropylene film seals well with bar- and impulse-type sealers. Cut-off can be accomplished with either reciprocating knives or cold wires.

As with all thermoplastic films, temperature should be controlled more accurately than with cellophane or wax paper; however, we feel that if polypropylene film is used on machinery specifically designed for thermoplastic films in accordance with operating procedures recommended by the machine manufacturer, completely successful commercial package production should result.

Forming and folding

Polypropylene film feeds well on all types of overwrap, bag and pouch machinery and equipment thus far tested, due to the superior stiffness of the material. Moderate or low slip is required for overwrap machines, whereas higher slip is necessary for bag machines. Slip is readily controlled in the manufacturing process, so that it is possible to tailor this property according to machine application. Static in the roll has sometimes caused trouble; however, care in slit-roll production and handling, along with suitable static eliminators on the machinery, can prevent this. Many machines use Teflon-coated parts to help increase slip in critical areas. Cut-off presented no problems on any machine tested. It is also possible to punch holes and make easy-opening tear perforations with present perforating attachments.

Thermoforming

Based on work carried on in our laboratory, we believe that AviSun polypropylene sheet will thermoform using commercial vacuum or pressure-forming techniques. We have produced tough, clear blister and skin packages using 4-mil sheet. Blisters made from 10-mil sheet have better clarity than those made of high-density polyethylene, in our experience.

Although we recognize that a film's success relies upon its ability to run trouble-free day in and day out in commercial production, we feel that our testing to date reveals no major difficulty with the film; therefore, we are confident that polypropylene film will prove to be another excellent workhorse of the packaging industry.

References

1. Miller, Bruce M., "Polypropylene Film," MODERN PACKAGING *32*, No. 5, 113-116 (Jan., 1959).

2. Gloor, W. E., "Polypropylene Resin," MODERN PACKAGING *32*, No. 6, 118-122, 177, 178 (Feb., 1959).

3. Southwick, C. A., Jr., "Prospects in Polyolefins," MODERN PACKAGING *32*, No. 8, 203-205, 278 (April, 1959). ●

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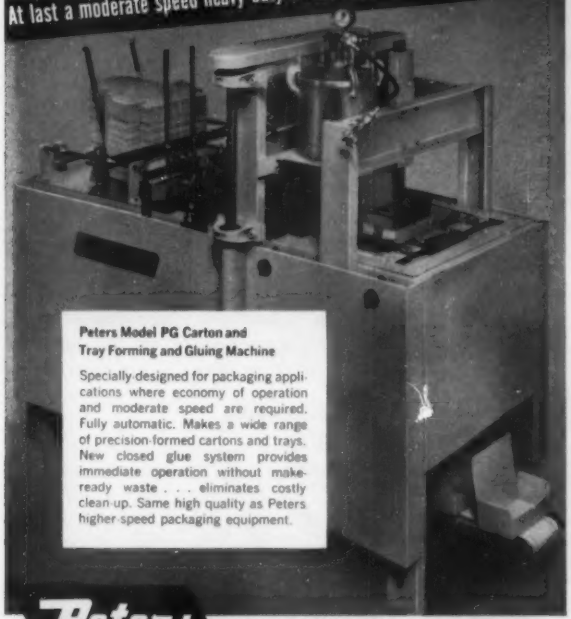

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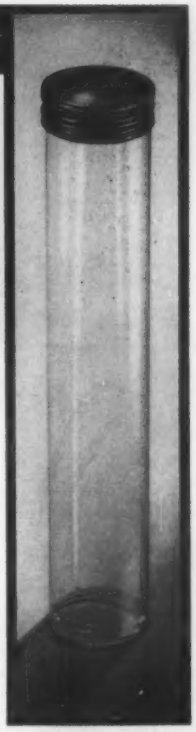

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Medium-density PE–

[*Continued from page 186*]

face and conditioned for 24 hrs. at 160 deg. F. under a 12-lb. load. The specimens were then examined for blocking. No trace of blocking was detected with any of the samples.

Abrasion resistance. Although abrasion tests were not conducted on this particular set of samples, it is considered worth while to include information on this property obtained from molded specimens. Figure 7 shows the relationship of abrasion resistance to density when measured using a Taber Abrader. The significant improvement on abrasion resistance for the higher-density specimens is apparent.

Conclusions

A large amount of data has been presented which can be of considerable importance to the polyethylene coater or the user of polyethylene-coated materials. The significant points to consider in reviewing this material are these:

First, where greaseproofness is required, the use of intermediate-density polyethylenes can offer properties comparable to low-density polyethylenes at lower coating weights, or in some instances offer properties not reasonably attainable with low-density polyethylenes.

Second, where WVTR is of importance, coating weights may be substantially reduced over low-density polyethylenes, thereby reducing cost in spite of the higher prices of the intermediate-density resins.

Third, where abrasion resistance is important, intermediate-density polyethylenes offer advantages not available with those of low density.

Finally, all these properties are attainable using presently available equipment without having to sacrifice extrusion behavior. ●

CORRECTION: Due to an error in the original announcement, Norman Hartmann, vice president of Lily-Tulip Cup Corp., was incorrectly identified as vice president of the Pure-Pak Div. of Ex-Cell-O Corp. on page 220 of the September issue of MODERN PACKAGING. This appeared in a listing of Packaging Institute professional members participating in a panel discussion on dairy-food packaging. The man who should have been identified as vice president of Pure-Pak is George D. Scott, another participant. ●

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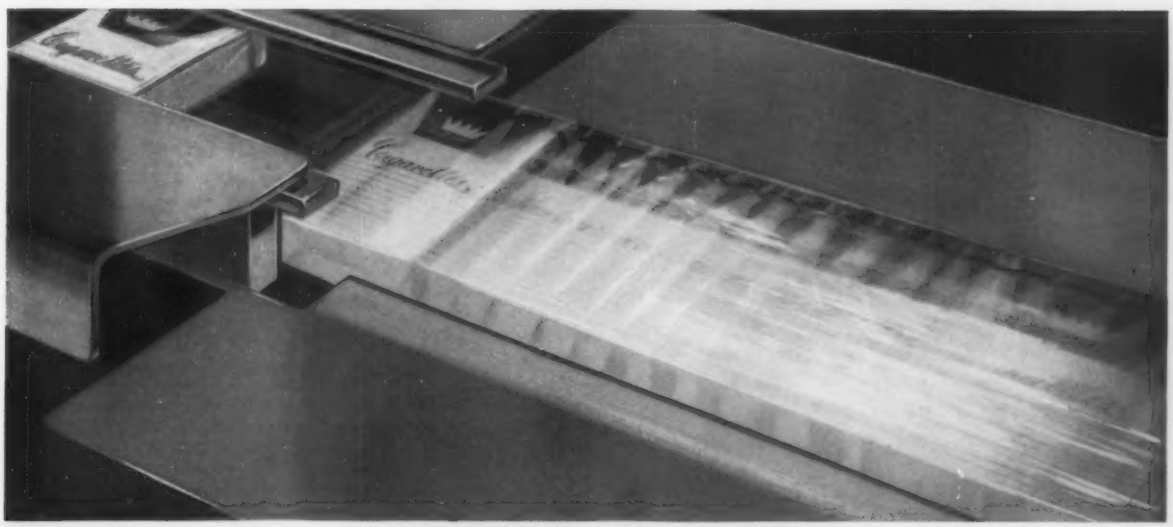

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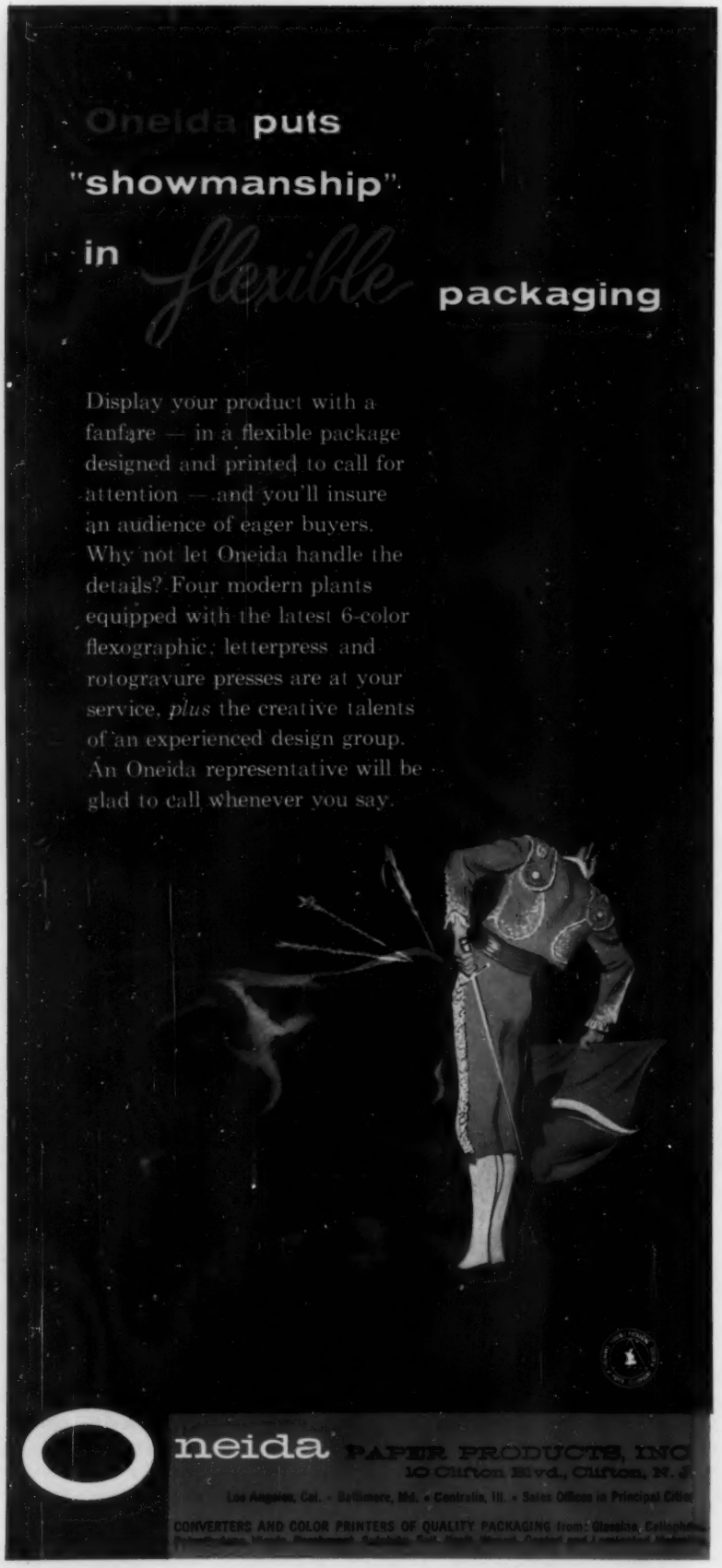
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PMMI exhibitors' list

[*Continued from page 165*]

ALUMINUM CO. OF AMERICA. *Booth 1008.* Exhibit of machine for manufacturing aluminum unit containers; a machine for applying aluminum Stericaps for the pharmaceutical field; aluminum closures for all types of glass containers. *Personnel:* J. S. Hamilton, H. J. Endean, R. W. Simmons, W. Turbeville, J. E. Hileman, R. R. Hill, H. W. Fritts, C. Sands, P. C. Althen, R. D. Rogerson. *Hotel:* Madison.

AMERICAN STERILIZER CO. *Booth 1117.* Display of combination gas/steam sterilizer; Cryotherm sterilizer for use with ethylene oxide mixtures; Spordex biological method for determining sterilization efficiency; Dynaclave portable pressure-steam sterilizer; self-sealing, heat-resistant Square-Pak flasks for chemical solutions, bacteriological culture media, etc. *Personnel:* E. D. Barry, S. M. Ellis, R. G. Reid, E. R. Bindseil, M. X. Stavers, *Hotel:* St. Moritz.

AMERICAN VISCOSE CORP., Film Div. *Booth 1106. Hotel:* Essex House.

AMPOULE MACHINE CO. *Booth 421.* Exhibit of Shields combination machine; Shields filler-capper-sealer. *Personnel:* W. A. Shields.

AMSCO PACKAGING MACHINERY, INC. *Booth 1001.* Latest applications of Amscomatic packaging method for assembly-line product packaging with fine line-edge sealing of polyethylene packages; power-jaw bag labeler and sealer; Frazier Whiz lifter conveyor; also Frazier Whiz Packer volumetric filler. *Personnel:* E. E. Messmer, J. D. Sylvester, J. D. Keenan, Jr., G. G. Cignoli, G. Wiedersheim, J. Kelly, F. Czifra, M. R. Frazier.

ANDERSON BROS. MFG. CO. *Booth 210.* Display of Model 600 rotary filler and capper for individual servings of cream, syrup and condiments; Model 520 sanitary eight-vane pump; Model 377 power filler for cottage cheese and similar products; Model 134 Speedy bagger; Model 157 utility table; Model C-2-2 hand filler. *Personnel:* R. F. Anderson, W. E. Gunnerson, H. Cop, W. Johannes. *Hotel:* Henry Hudson.

ARABOL MFG. CO. *Booth 1108.* Display of adhesives for all packaging operations; Ara-Size to upgrade paperboard for sharper printing; Ara-Paint for plant improvement. *Personnel:* E. Diedrichs, W. A. Weaver, H. Weingartner, W. Godfrey, C. Erikson, J. Gerhart, W. Thompson, E. Emerson. *Hotel:* Henry Hudson.

ARENCO MACHINE CO., INC. *Booth 201.* Display of type GAB/GAP tube-filling machine for automatic filling and closing of collapsible metal and plastic tubes at 50 tubes per minute; type VUF bag feeding and opening machine, connected to an Alite loose filler, that is able to control speed of connected

portioning machine; Type A.T.5 Alite fully automatic powder-compressing machine for production of cream-powder compacts at speed of up to 1,200 containers per hour; Alite vial-filling machine for powders and granulars designed to give accurate filling from 25 milligrams up to 8 grams; Type KIPAK Kisab filling and wrapping machine adjustable for liquids, powders and granular substances; Type IMK Kisab automatic wrapping machine for lollipops, ice-cream sticks and different kinds of hardware. *Personnel:* R. Johnson, H. Morse, T. Gronberg, B. Nordahl.

AUTOMATION. *Booth 319.* Exhibit of Penton publications, including *Automation, Steel, Foundry, Machine Design* and *New Equipment Digest. Personnel:* R. C. Jaenke, L. Brennan, R. Bolz, J. Keebler. *Hotel:* Hampshire House.

AVERY LABEL CO., Div. of Avery Adhesive Products, Inc. *Booth 719.* Complete line of pressure-sensitive labels printed on paper, film, fabric, foil and metal; new Etiprint Super imprinter; automatic labeler; decorative products including Mylar-vinyl laminates; complete line of electric and manual label dispensers. *Personnel:* R. W. Morris, M. A. Contreras, H. V. McKinley.

BARKLEY & DEXTER, INC. *Booth 105.* Examples of various types of specialized machines designed and developed for clients. *Personnel:* R. G. Dexter, P. Cheney, T. McGill, R. French. *Hotel:* Barbizon Plaza.

BARTELT ENGINEERING CO. *Booth 317.* Automatic machine for pouch packaging; also stand filler. *Personnel:* W. T. Boston, R. D. Lamb, E. R. Peterson, R. H. Baker, J. L. Tobin, R. W. Cotta. *Hotel:* Barbizon Plaza

BATTLE CREEK PACKAGING MACHINES, INC. *Booth 815.* Exhibit of new polyethylene wrapping machine with patented Thermo-Pad sealing system, end or underfolding attachments, easy-opening perforating attachments, and quick adjustability; a 150-per-minute wrapping machine for large packages; also pouch-packaging machine with quick adjustability over a wide range. *Personnel:* B. H. Redner, K. H. Redner, C. West, Jr., A. J. Winhusen, R. La Pierre, F. Zerad, W. B. Shelley, Arthur Axberg & Associates.

BELL-MARK CORP. *Booth 103.* Exhibit of new Model 1006A Electra-Printa to imprint registered marks of various cut-off lengths without changing cylinders; conveyor-mounted printing and coding attachments; automatic code dater that prints container bottoms; line of adhesive-back printing plates, baselock type; also assortment of label printers. *Personnel:* J. Mastracchio, L. Guida, R. Clark, R. Heller, W. Schram, E. O'Brien, T. Casey. *Hotel:* Essex House.

BEMIS BRO. BAG CO. *Booth 414.* New "Auto-Mac" multiwall bag-feed-

[*Continued on page 268*]

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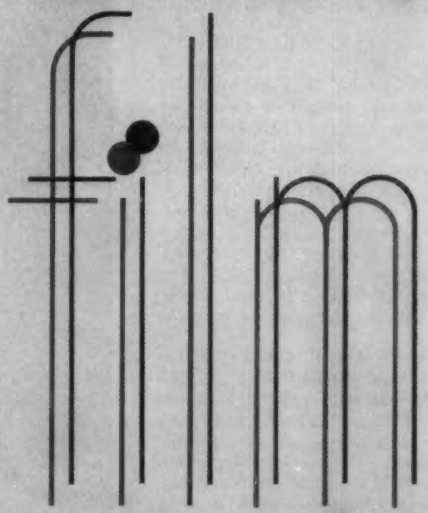

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PACKAGING & WEIGHING MACHINES. Illustrated 12-page brochure describes a line of automatic weighing-filling and packaging machines handling a wide variety of food products and types of packages. Also brochure on cartoning machinery. Burnet Co. (K-953)

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GLUERS & CEMENTERS. Two illustrated 4-page brochures and a catalog sheet describe a line of industrial gluers from 16 to 42 in. wide, gluers and cementers from 12 to 30 in. wide and edge gluers and cementers from 3 to 15 in. wide. Schaefer Machine Co., Inc. (K-956)

STATIC ELIMINATORS. Illustrated 8-page brochure describes a line of plug-in electrical static eliminators for presses, packaging machines, etc. Bars ¾ and 1 in. in diameter, lengths from a single point upward. Also round and other special shapes. Portland Co. (K-957)

GLUING, COATING MACHINES. Illustrated 4-page brochure and catalog sheet describe a line of gluing, cementing, coating and laminating machines, label activators, label pasters, combining press, tube labeller, etc. Potdevin Machine Co. (K-958)

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VACUUM FORMING. Illustrated 8-page brochure describes the facilities and services of a contract vacuum former, showing and discussing typical products, including lighting panels and blister and skin packages. Chanal Plastics Corp. (K-962)

BASIS WEIGHT SCALES. Illustrated 4-page brochure describes a wall type basis weight scale calibrated to show weight of a ream when one sheet is weighed. Accurate to 1/10th lb. per ream. Interchangeable dials. Thwing-Albert Instrument Co. (K-963)

SILK SCREEN PACKAGE DESIGN. Illustrated 17-page brochure discusses the history, principles and varieties of silk screening done by the company, on glass, plastic and metal packages. Ceragraphic. (K-964)

LAUNDRY SHIRT PACKING. Illustrated folder describes a fast, simple method of packing laundered shirts in polyethylene bags, based on bags in a continuous roll, with snap-off perforations. Technical Tape Distributing Co. (K-965)

BLOW MOLDER. Illustrated technical data sheet describes a blow molding machine normally coupled with an extruder within the range of 1¾ to 3½ in. Platen size (front to back, top to bottom), 8 x 8 in. Max. mold length, 24 in. F. J. Stokes Corp. (K-966)

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COATED PAPERS. Illustrated 4-page brochure, printed on a coated stock made by the trailing blade process, shows how its levelness and cushion effect influence reproduction of metallic, gloss and standard process illustrations and B&W halftone. Complete line. Oxford Paper Co. (K-969)

WRAPPING MACHINES. Data sheets describe two models of a wrapping machine. One handles wall paper rolls and similar products, 20 to 40 per min., 20 to 30# Kraft. The other wraps crackers, 60 to 100 packages per min., waxed paper. Hudson Sharp Machine Co. (K-970)

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ODD-SHAPE COUNTER. Illustrated data sheet describes a machine that counts odd-shaped pieces that previously were packaged and sold by weight. Dimension range, ¾ to 4 in. Weight range, 1/20 oz. to 1 lb. Counts 2 to 20 pieces per sec., exact accuracy. Atronic Products, Inc. (K-973)

VIBRATORY FEEDERS. Illustrated 6-page brochure describes a line of vibratory feeders with electro-permanent magnetic drive, in models handling up to ½, 1, 2, 4 and 10 tons per hour, for mixing, spreading, sorting, aerating, cooling, drying, etc. Eriez Manufacturing Co. (K-974)

RECYCLING CONTROLLER. Data sheet describes a continuous cycling, preset counter-controller which can be used for one-count switching, one-cycle switching or differential (add & subtract) counting and switching. Counter and Control Corp. (K-975)

CELLOPHANE, POLYETHYLENE BAGS. Illustrated 18-page brochure gives specifications for a line of ready-made bags and provides information for determining type, size, loading method and closure suitable for a wide range of products. Dobeckmun Co. (K-976)

SHORT-RUN COLOR PRINTING. Illustrated 4-page brochure describes a 4 or 5 color process printing service for runs of 25,000 to 100,000 which offers economy because many jobs are run on one large press sheet. 70# coated book paper. Labels, inserts, etc. Muirson, Inc. (K-977)

ELECTRONIC WEIGHING. Illustrated 6-page brochure describes a line of electronic weighing equipment in printing desk and cabinet models, remote-indicating and numerical-indicating models. Also illustrated 12-page technical discussion of electronic weighing. Streeter-Amet Co. (K-978)

CONTRACT PACKAGING. Illustrated 4-page brochure describes the facilities and services of a contract packager. Services include product development, compounding, warehousing and drop-shipping. Acepak, Inc. (K-979)

ATMOSPHERE HEAT TREATING. Illustrated 4-page brochure describes a new line of heat exchangers for heat treating in hydrogen and other protective atmospheres. Cites case histories. Ferrotherm Co. (K-980)

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VIBRATORY PACKERS AND JOLTERS. Illustrated 4-page brochure gives descriptions, data and specifications for 8 electromagnetically vibrated packers and two hydraulic jolters. Shows and describes typical applications and installations. Syntron Co. (K-982)

PACKAGING LABORATORY SERVICE. Illustrated 6-page brochure describes the facilities of a laboratory which studies foods and non-foods for their adaptability to compressed-gas packaging, as a customer service. Air Reduction Co., Inc. (K-983)

MARKING EQUIPMENT. Illustrated 12-page catalog shows automatic equipment for marking electrical and electronic products, including cylindrical and irregular shapes, tapes, tubing and wire. Markem Machine Co. (K-984)

FILM-WRAPPING FOODS. Illustrated bulletin sheet describes the two machines and procedures for tight-wrapping food products in twist-end film packages, single or double layer. Amsco Packaging Machinery, Inc. (K-985)

STEEL DRUMS AND PAILS. Illustrated 44-page catalog gives specifications for a line of steel drums and pails for liquids, solids and semi-solids, available with a variety of covers, closures, fittings, agitators and interior coatings, and lithographed or printed to order. Jones & Laughlin Steel Corp. (K-986)

RUBBER PLATE MAKING PRESS. Illustrated data sheet and 3-page bulletin describe a press for making rubber printing plates, available with platens in sizes of 6 x 8, 11 x 13, 12 x 15 and 13 x 18 inches. Price list for plate-making supplies. American Evatype Corp. (K-987)

CAN PACKERS. Illustrated 12-page brochure describes a line of can packers in models which pack full cans, empty cans or both into cartons. Electric-mechanical and pneumatic models. Also an automatic case opener, former, positioner. Russell Div., Crompton & Knowles Packaging Corp. (K-988)

PAPER & PLASTIC PACKAGES. Illustrated 12-page brochure describes the facilities and products of a manufacturer of freight car liners, swimming pool liners, machine covers, insulated bags, protective shipping covers, krinkled Kraft, etc. Kennedy Car Liner & Bag Co. (K-989)

POLYETHYLENE FOR PACKAGING. 8-page brochure gives technical data on a new polyethylene of low molecular weight, specifically designed for packaging. Has many physical properties of higher weight formulae, but exhibits low melt viscosities at relatively low temperatures. Eastman Chemical Products, Inc. (K-990)

CONTRACT LIQUID-PACKAGING. Illustrated 8-page reprint describes the history, facilities, services and procedures of a contract packager specializing in liquids, aerosol and conventional. Fluid Chemical Co., Inc. (K-991)

CORRUGATED DISPLAY PIECES. Illustrated 4-page brochure discusses the value of corrugated boxes and display stands, suitably printed, as merchandising pieces. Gaylord Container Corp. (K-992)

SILICONE RELEASE AGENT. Technical data sheet describes a heat-stable, non-toxic silicone release agent used on heat sealing irons to prevent wax build-up and in many other packaging applications. Dow Corning Corp. (K-993)

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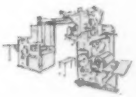
PACKAGES FROM CELLOPHANE, COATED PAPERS, ALUMINUM FOIL OR ANY FLEXIBLE PLASTIC FILM . . . RIGID PLASTIC CONTAINERS . . .

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VACUUM OR GAS-FLUSH PACKAGES FOR FOOD PRODUCTS . . .

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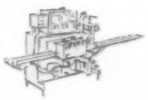
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COSMETICS, OR FOOD . . .

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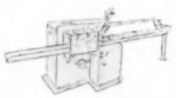
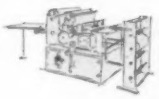
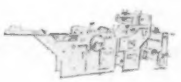

SLITTING, SHEETING, OR RE-WINDING . . .

THERMO-FORMED CUPS . . . RIGID PLASTIC ITEMS

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TO LARGE INDUSTRIAL

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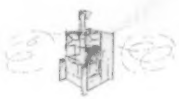
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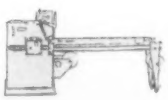
CONTRACT-PACKAGING FOR MARKET TESTS . . .

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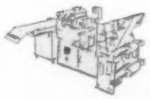
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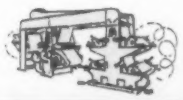
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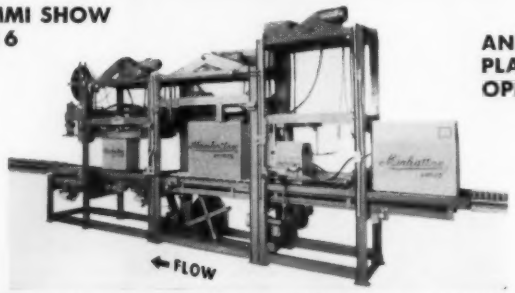

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IT'S A MARVEL IN TAPE SEALING AUTOMATION
THE BEST NAME IN TAPING AND GLUING
It costs to put off . . . Phone or wire now . . .
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Shown is only one of many Wrap-Ade Unit Packagers. Other models available for packaging:
- LIQUIDS
- POWDERS
- TABLETS
- SOFT GOODS
- FOOD PRODUCTS
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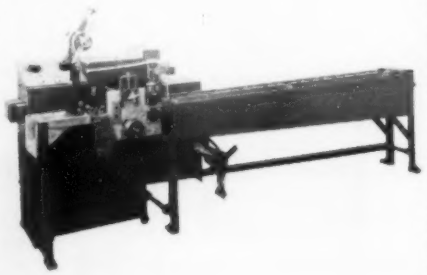
or any reasonably flat small product

Send us a sample of your product today for our prompt quotation.

ADJUSTABLE UNIT PACKAGER
with CONVEYOR FEED
Ideal for packaging small textile products, flat food items, paper goods, toys, bandages, hardware, or any other reasonably flat small product. Speeds up to 130 packages per minute.

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Celebrating a Quarter Century of Progress in Packaging
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[*Continued from page 263*]
ing machine in operation for free-flowing products; also latest in high-speed bag-closing equipment in connection with displays manned by special representatives from plants producing plastic, multiwall, textile, paper specialty and waterproof bags.

BETTER PACKAGES, INC. *Booth 827.* Display of manual and electric gummed-tape dispensers, including new automatic electric models. *Personnel:* T. H. Krueger, M. W. Waggoner, L. E. James, O. K. Hill, N. Campanaro, R. Chilton, K. G. Ellison, J. J. Murphy, F. Smith, H. B. Smith, B. Stallings, W. Turner, J. C. Valestin, C. L. Wishner. *Hotel:* Manhattan.

BIVANS CORP. *Booth 1109.* Automatic cartoning machinery. *Personnel:* E. L. Bivans. *Hotel:* Essex House.

BURNET CO., Production Equipment, Inc., Div. *Booth 115.* H & K automatic two-piece capsule filler that assures accurate fill; also automatic Triumph electronic counter Model TB3 with automatic bottle gating mechanism; redesigned and improved Triumph electronic counter Model TB2; Triumph unscrambler with orienting device enabling it to handle odd-shaped containers; new Rotax tablet-capsule counter; improved Triumph automatic cottoner. *Personnel:* L. S. Hyams, G. T. Pohle, H. E. Mabie, M. M. Garvey.

BURTON, JOHN, MACHINE CORP. *Booth 517.* Operation of two-mandrel Cellubander applying short cellulose band to small, rigid plastic vial; stainless-steel, three mandrel Model 3-210 Cellubander. *Personnel:* H. B. Rice, T. A. Haskell. *Hotel:* Henry Hudson.

BUTLER AUTOMATIC MACHINE, INC. *Booth 1122.* Display of Model SU Series splicer, operating with a Package Machinery Co. CMT cigarette wrapper; Model SPL-25-A splicer for high-speed machines such as Package Machinery Co. Versaflow 400; Model SPL-50 splicer for wrappers with maximum web width of 12 in.; Model SPL-1200 splicer for printing-press applications with roll web widths up to 30 in.

CAMERON MACHINE CO. *Booth 822.* Slitting and roll-winding machine and auxiliary roll-production equipment. *Personnel:* E. J. Ward, L. Rockstrom, G. Velez, R. Sherman, P. B. Withstandley.

CHAIN BELT CO. *Booth 716.* A. S. A. standard roller chain; also Platetop roller chain; Chabelco steel-roller chain; FlexTop chain; TableTop conveyor chain (nylon and steel); 9250 and SM 120 case conveyor chain, and complete line of Shafer self-aligning roller bearings. *Personnel:* W. E. Kennedy, S. H. Kurtz, G. J. Schuelke, E. N. Lutts, C. D. Bergen, W. W. Dawson, N. R. Hibbard, J. P. Foster. *Hotel:* Statler-Hilton.

CHISHOLM RYDER CO. OF PA. *Booth 930.* Model V fully adjustable

PHOTOGRAPHY BY DICK BOYER

BERNARDIN closures keep good company!

Brand Preference is the expression of customer satisfaction earned by a product over its competitors. We like to feel that our relations with "French's Mustard" likewise confirms the expression of the several satisfactions a closure must provide "on the line," during shipping, at the retailers and in the consumer's hand. *May our Closure Craftsmen work with you?*

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through creative molding by Dillon-Beck's Design and Engineering Staff ... specialists in producing pace-setting plastic packaging and molded parts.

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Designed and produced to soothe more, sell more ... threaded, rotating pin and cup precision-molded to raise and lower Lipkote as needed.

ADDED ATTRACTION:
Flexible, easy-fitting polyethylene cap has personalized markings (○-△-☆-□) for individual identification.

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labeling machine for glass with booster feeding elevator; Model C-20 feed table; Model C feed disk; series #5, #30 and #40 liquid-filling machines. *Personnel:* W. B. Sanford, W. Reimer, H. G. Manley, K. B. Severson, W. F. Roth, E. J. Abendschein. *Hotel:* Statler-Hilton.

C. I. T. CORP. *Booth 715.* Presentation showing advantages of long-term financing geared to depreciation schedules in the purchasing of packaging machinery. *Personnel:* T. E. Lenihan, R. S. Murphy, D. C. Brown, E. T. Neville, R. S. Wallace. *Hotel:* Barbizon Plaza.

CLARK-AIKEN CO. *Booth 1210.* Air table and lift table on exhibit. *Personnel:* J. C. Hart, J. J. Waddock, E. A. Lowry.

CLYBOURN MACHINE CORP. *Booth 505.* Exhibit of CMC carton filling and sealing machine with net-weighing scale; also Intermittent Tuc-Pacs. *Personnel:* H. Tellfors, R. W. Lehmann, F. Thomsen. *Hotel:* Henry Hudson.

COLTON, ARTHUR, CO., Div. of Snyder Corp. *Booth 816.* Exhibit of new aerosol-filling line to handle 30 containers per minute on a single straight line, or 60 on a twin line, with variable-speed drive, double-ported, two-nozzle Model 15MS filler, single-head crimper and single-head pressure filler for liquids and light viscous materials; Model 175 filling machine with new Model 176 polyethylene tube-sealing and coding conversion unit; new rotary unscrambler which operates in conjunction with filling machine or other equipment; Model 106 liquid filler with four fluid-ounce fill; Model 19A six-line filling machine for one-pint containers; Model 15RF2 filler for one-pint containers; Model 1352-9 rotary vacuum crimper; Model 1651-9 rotary pressure filler with zero to 120-cc. heads. *Personnel:* K. B. Hollidge, W. A. Doepel, L. P. Gajda, L. H. Kinsley, C. Edgar, R. Clark, A. Pearce, W. Smith, E. Kistner, R. King, G. Kohler, D. Richards, J. Barry, C. Packard, D. Wooten, L. A. deBarros, J. Roman, G. Zanetakos, R. B. Stanley. *Hotel:* Hampshire House.

CONAPAC CORP. *Booth 730.* Exhibit of Roto Wrap Model 300 for vacuum and gas packaging of meats and cheeses; Roto-Wrap Model B unit-packaging machine; Walgan M-20 for production of side-weld bags; Holweg HE-5 rotogravure color station; Formseal machine for automatic packaging in rigid plastic containers. *Personnel:* R. H. Schnoor, J. H. Brezinski, J. C. E. Williams, E. E. Miranda, C. F. VanSweringen, H. Beams, A. Gans, A. Moravec, F. R. DiFranco, K. R. Fritts, J. H. Beckman, C. Decordey. *Hotel:* Park Sheraton.

CONSOLIDATED PACKAGING MACHINERY CORP. *Booth 416.* Exhibit of Newman seal capper; plastic captive-cap capper; also Model 171 bag closer. *Personnel:* E. L. Kuhn, J. L. Scanlon, A. J. Champagne. *Hotel:* Essex House.

CONTAINER EQUIPMENT CORP. *Booth 1205.* Exhibit of Ceco Model 40, two-station adjustable cartoner for handling wide range of carton sizes. *Personnel:* E. M. Kucklinsky, R. W. Walters, A. D. Farnow, C. Ashe, W. E. Haberland, R. L. Taylor, F. Eckert, J. Madden, R. P. Anderson. *Hotel:* Essex House.

CROMPTON & KNOWLES PACKAGING CORP. *Booth 1021.* Exhibit of Model CKDWS for overwrapping molded candy in unbacked foil with automatic feed units at speeds up to 160 per minute; Model CKDW for wrapping vending items; Model CKDW2 multi-form wrapper for overwrapping various products without making machine changes; Model CKDW4 for overwrapping bakery items; also mechanical case opener, former and positioner for automatic opening of corrugated case. *Personnel:* W. W. Anthony, Jr., L. K. Kniffin, Jr., L. Lakey, D. Wilson, C. A. Dumas, R. J. Taylor, E. T. Melle, G. J. Lawrence, S. E. Perkins, L. F. Shattuck, P. W. Frey, T. E. Dombroski. *Hotel:* Essex House.

DENNISON MFG. CO. *Booth 1214.* Operation of Therimage machine demonstrating Therimage process for decorating squeeze bottles; machine showing application of Therimage labels on cellophane which also can be used on foil, wax paper, polyethylene and other materials. *Personnel:* R. B. Hulett, H. C. Weeks, H. E. Webster, S. F. Mann. *Hotel:* Barbizon Plaza.

DERBY SEALERS, INC. *Booth 214.* Display of Dispens-A-Ply automatic product labeler; full line of electrically and hand-operated dispensers for gummed tape, pressure-sensitive tape and pressure-sensitive roll labels. *Personnel:* A. P. Krueger, W. J. Eilerman, J. J. Lowe, H. Schluter, M. B. Fabian. *Hotel:* Park Sheraton.

DODGE FIBERS CORP. *Booth 1026.* Exhibit of Teflon-coated glass fabric; pressure-sensitive Teflon tape; endless belts of Teflon-coated glass. *Personnel:* C. Dodge, Jr., W. Petitt, J. Boushall.

DOUGHBOY INDUSTRIES, INC. *Booth 1222.* Display of new chain band heat sealer; new chain bead sealer; new glue heat sealer; power jaw heat sealer; also other standard machines. *Personnel:* E. R. Livingston, J. Grevich, H. Weatherhead. *Hotel:* Barbizon Plaza.

DU PONT, E. I., DE NEMOURS & CO., INC., Film Dept. *Booths 1227, 1229.* Display of 30 types of packaging film designed for machine application, including cellophane, polyethylene, acetate and Mylar; also Cel-O-Seal cellulose bands which are applied by machine for protection and merchandising advantage. *Personnel:* M. V. Noble, T. W. Holland, D. R. Kinloch, E. A. Britton, D. E. Monigle, E. V. Grandy, R. L. Smith, H. E. Walthor, H. C. Broems, H. D. Chickering, P. G. Stephan, A. P. Baldwin, H. P. Madsen, H. A. Lesher,

Luxury cosmetic packaging.... with positive product protection

Sutherland know-how adds a performance bonus

Packaging has extraordinary importance in cosmetics. Not only must surface design and printing be *right* but protection of fragile merchandise must be perfect.

Sutherland construction design—plus facilities for precise fabrication—can be unusually valuable in cosmetic packaging. In this case, an extension of the back panel provides an inner glued liner that gives double cushion protection to the bottle, while a slot anchors the distinctive helmet cap. The construction simplifies automatic packaging for additional overall savings.

Whether you want the lustre and richness of foil, the unusual in construction, or the daintiness of soft colors properly printed write for Sutherland recommendations, samples, and prices. Do it today—for a new lift in sales.

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PAPER COMPANY
KALAMAZOO • MICHIGAN

Plants at Kalamazoo, Mich., Santa Clara, Calif., Albany, Ga., and Fort Orange Paper Co., Castleton-On-Hudson, N.Y.

WHERE THERE'S BUSINESS ACTION THERE'S A BUSINESSPAPER

Some blessings we take for granted. Like ice cubes. Or indoor plumbing. However, older men—wiser men—say a little prayer of thanks for things they know they couldn't do without.

Among these wiser men are the men who make top-level decisions in business.

To make decisions, they must have facts. All the facts. All the pertinent information they can get. And they get a major portion of that information from one unique source: the business publications they subscribe to.

No businessman is fully informed until he reads his businesspaper. He reads it for profit, not for pleasure. He searches it through for news of the trade or industry. For facts. For fresh ideas. For new products he can put to work. And he reads the advertising with the same intense concentration he devotes to the editorial pages.

He knows that his businesspaper is vital to his success—to his very livelihood. And he says a little prayer of thanks.

Every man on the way up can profit from his example. Take a tip from the reading habits of key men at every level. Take out a subscription of your own. Read every issue...and read it searchingly. It's *your* businesspaper, too.

MODERN PACKAGING

One of a series of advertisements prepared by THE ASSOCIATED BUSINESS PUBLICATIONS

. . . the way my sales jumped and profits exploded when I went to Fairlon* polyethylene film packaging. It brings customers face-to-face with my products. Irresistible! And trouble-free machinability, too, because Fairlon* is the only polyethylene stamped *researched by Chippewa.* That means it's the finest available, made to rigid specifications on specially developed equipment to assure unmatched clarity, strength, and protection for your products. And the way it takes printing. Tremendous! If you're not in competition with me, switch to Fairlon* polyethylene film for perfect packaging.

There is a Chippewa product for every packaging need.
For technical assistance or specifications on Fairlon Sheeting and Tubing, contact:*

CHIPPEWA PLASTICS CO.

Division of Rexall Drug and Chemical Company
Chippewa Falls, Wisconsin

The mark of leadership

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THE NEW ANSWER

to your slitting problems!

AUTOMATICALLY slits plastics, pressure sensitive tapes, gaskets, etc., from the mill roll, WITHOUT REWINDING.

See the NEW sensational LEV • AIR • MATIC 500 in our hospitality room in the Henry Hudson Hotel, room 510 located opposite the Coliseum. On display during the PMMI Show, Nov. 17-20 or visit our permanent display at our New York home office.

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VALUABLE INFORMATION: If you are unable to see the LEV • AIR • MATIC demonstration, mail the coupon below to get complete facts on this amazing machine.

LEVER MANUFACTURING CO., INC., 120 West 31st Street, New York 1, New York
Please send us complete information on THE NEW ANSWER to our slitting problems.

NAME_____

STREET_____

CITY_____ STATE_____

Q. C. Jurgensen, R. J. Eubanks, G. W. Schlerf, J. K. Goundie, W. J. Yerkes. *Hotels:* Barbizon Plaza, Park Sheraton.

DUSENBERY, JOHN, CO., INC. *Booth 1110.* Exhibit of film slitter-rewinder; trim-removal system; web-tension indicator; core cutters; also photos and technical information available on paper, film and foil laminator. *Personnel:* J. Dusenbery, R. Young, J. Rienau, F. Kerber, H. Hunt, F. Brombacher.

ECONOMIC MACHINERY CO. *Booth 1000.* Display of World Super C. M. labeling machine equipped to apply front and back body labels on polyethylene containers at speeds up to 300 per minute; World Super C. M. labeler equipped to apply front, back and wrap-around neck labels simultaneously to 4/5 qt. whiskey bottle. *Personnel:* G. L. N. Meyer, Jr., J. F. Parsons, S. T. Carter, R. C. Poore, W. J. Kastner, W. K. Clarke, R. J. Geiger, D. R. Phillips, A. R. Johnsen, R. K. Larrabee, F. E. Loonam, J. M. Stein, F. R. Olivan. *Hotel:* Statler-Hilton.

ELECTRONIC MACHINE PARTS, INC. *Booth 220.* Exhibit of photo-electric regis ration-control equipment; complete line of units covering applications for intermittent or continuous rotary machines involving localization, spot cutting or synchronization; feed-roll mechanisms applicable to equipment presently in production. *Personnel:* W. T. McAdam, A. Handal, G. Geras.

ELGIN MFG. CO. *Booth 1215.* Exhibit of new two cylinder, non-stop piston filler; Model GSA automatic wrapping machine; Model EZA semi-automatic wrapping machine. *Personnel:* G. R. Stevens, A. R. Stevens, E. E. Johnson, W. E. Jensen, D. M. Webster, G. R. Williams, W. B. Sanford, H. Fehrs, H. C. Manley, W. Reimer, P. B. Sanford, T. L. Hashall. *Hotel:* Statler-Hilton.

EMHART MFG. CO. *Booths 411, 415.* Display of S-K Integer complete casing machine; also new S-K Glu-Line. *Personnel:* W. W. Lauer, L. E. Johnson, S. W. Capper, A. L. Johnson, J. W. Hull, D. E. Smith, D. T. Taff, L. E. Leyner, J. H. Samuels, R. B. Little, E. J. Dombroski, K. Holstebro, A. J. Hetzel, H. S. Kayser. *Hotel:* Henry Hudson.

EXACT WEIGHT SCALE CO. *Booth 200.* Display of newly designed Selectrol automatic check-weighing machines; Model 1206 for small products and packages up to 10 lbs.; Model 1250 Selectrol for case and bag check-weighing with a maximum weight capacity of 200 lbs.; basic weight classifier with automatic weight-computing and recording device; automatic net-weighing machine; full line of Shadograph scales. *Personnel:* W. A. Scheurer, W. J. Schieser, R. M. Rapp, W. Hecox, J. F. Baldwin, K. Courtney, E. Griffin, W. Clark, R. White, J. E. Konkle, E. A. LeVay, J. Mansberger, D. Anderson, W. W. Jones

FELINS TYING MACHINE CO. *Booth 321.* Exhibit of three models of Pak

CMV paces operators, *keeps cartoning rates high. Loading area can accommodate up to 5 operators whose only duty is to load product into carton.*

Attend PMMI—Visit Jones Booth 1015.

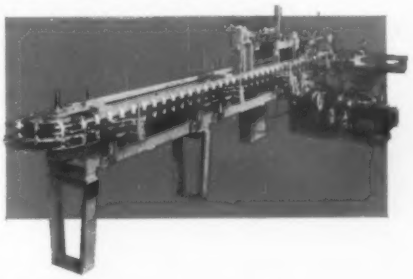
Fragile electronic tubes cartoned semi-automatically at 5000/hr with JONES CMV

"Tung-Sol Electric Inc. applies the principles of cartoning automation to such fragile products as electronic tubes," according to Ed Price, warehouse coordinator at the Tung-Sol Bloomfield, N. J. plant. "In addition to the 15 million+ tubes Tung-Sol cartons automatically every year, 2 million more are cartoned semi-automatically on our Jones CMV (constant motion vertical) cartoner at speeds up to 5000/hr. Automatic operations include opening tuck style carton, closing bottom, and (after product has been loaded manually), closing the carton. A rotary imprinter on the CMV prints the part number on top end panel of carton.

"Our Jones CMV also gives us the advantage of wide carton range flexibility," Mr. Price states. "We run five different size tubes on it, and can change over from one to the other in less than 15 minutes."

This fast, gentle handling is characteristic of the Jones CMV cartoner . . . over 200 of which are used successfully by manufacturers of pharmaceutical, cosmetic, chemical, automotive, electrical, electronic and similar hard-to-carton products.

It will pay you to talk to a Jones representative. He'll show you how Jones semi-automatic cartoning can speed up your packaging lines . . . with substantial savings in labor.



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Only Bradley-Sun offers both plastic and metal tube-packaging for your product. Expanded facilities are now combined with thorough production control to assure delivery of these quality products! Complete coatings for both internal and external application! Call your Bradley-Sun representative for helpful information. We're dedicated to your needs.

BRADLEY Sun

Division of
American Can Company
Hillside, New Jersey

Tyer tying machines for tying of various-size containers. *Personnel:* H. Kohler. *Hotel:* Henry Hudson.

FERGUSON, J. L., CO. *Booth 823.* Operation of Packomatic's new Omnimatic case gluer and Rotopress case sealer for gluing and sealing cases of varying dimensions in random order. *Personnel:* J. L. Ferguson, Sr., J. L. Ferguson, Jr., R. C. Ferguson, D. O. Ferguson, R. C. Talbot, R. C. Kielpinski, W. Gary, R. Schunk, J. Knight, J. Cleaver, R. Paul, J. W. Loeffler, E. J. Mercer, J. Pasteris, J. P. Stirniman, R. Darling, D. R. Piggott. *Hotel:* Essex House.

FIFE MFG. CO. *Booth 740.* Demonstration of principles of automatic web guiding involved with Kamberoller method of guiding a web at intermediate points and Shifta-Roll Stand method of mounting an unwind roll to lateral shifting, both powered by a dual pneumo-hydraulic type of automatic web-guide power unit wherein both operations are performed separately yet simultaneously from the one power source; also automatic web-guiding components and auxiliary items related thereto. *Personnel:* I. L. Fife, C. W. Brown, D. G. Fife, R. W. Powers, W. A. Schilling, F. C. Ames, J. F. Slaughter.

FISCHBEIN, DAVE, CO. *Booth 102.* Exhibit of bag-closing equipment. *Personnel:* H. Fischbein, G. Fischbein, S. Shark. *Hotel:* Park Sheraton.

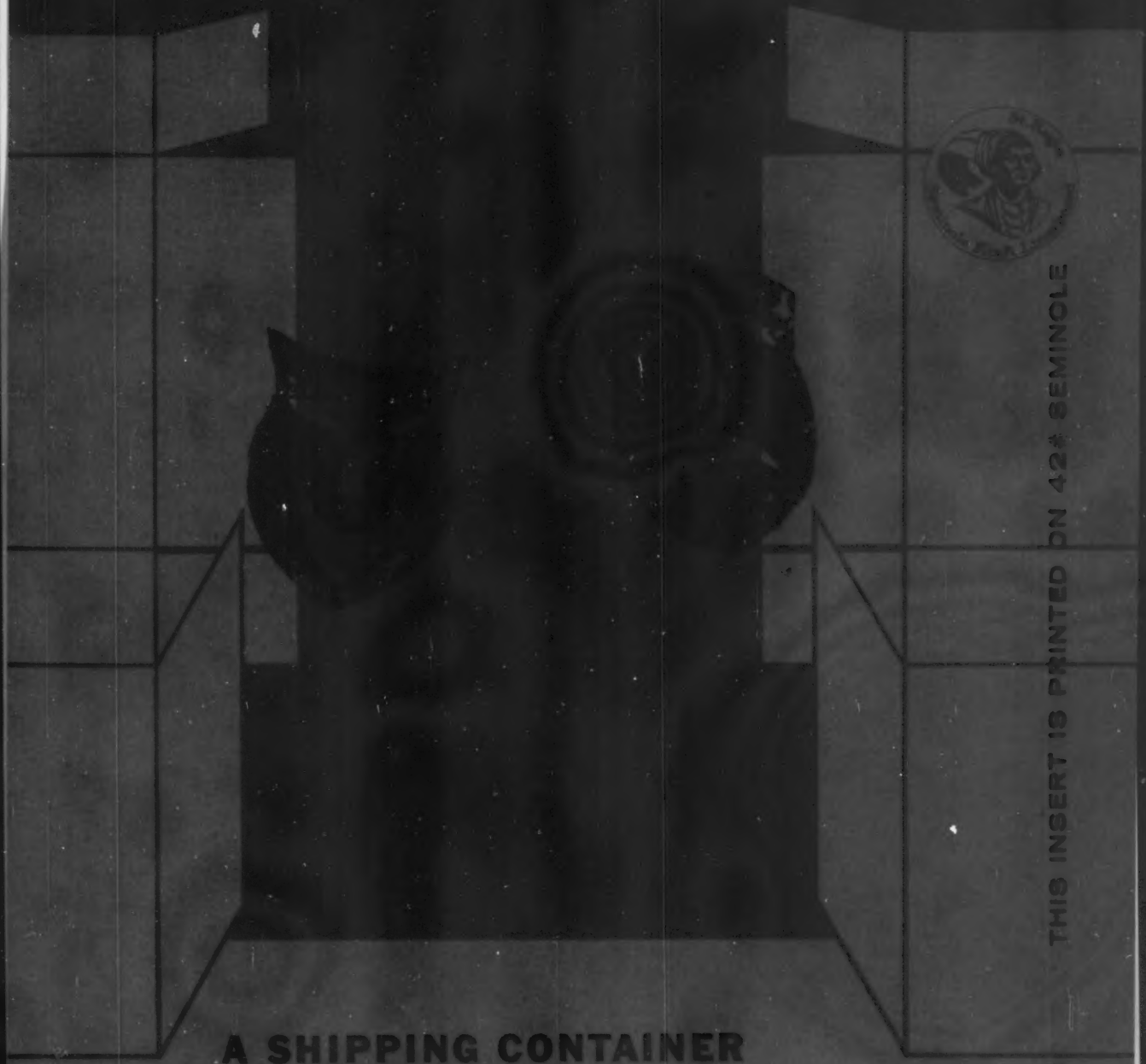
FOOD MACHINERY & CHEMICAL CORP. *(See Hudson-Sharp Machine, Simplex and Stokes & Smith.)*

GENERAL CORRUGATED MACHINERY CO., INC. *Booth 316.* Model # TS-30SS automatic case sealer-taper, self-setting machine for sealing random-size cases which receives cases from gravity conveyor, indexes cases, automatically adjusts to case size, closes top flaps and applies gummed tape to top and bottom of case and rolls extended ends of tape onto the end panels for complete single-strip sealing to comply with amended Rule 41; it accommodates rolls of tape up to 24 in. in diameter. *Personnel:* R. J. Baisley, C. D. Keely, F. Kruglinski, B. Swanson, P. Bergstrom, W. Hartung.

GENERAL PACKAGING EQUIPMENT CO. *Booth 723.* Exhibit of new machine offering complete packaging automation for potato chips and related items. *Personnel:* G. A. Perlitz, D. H. Zwight, J. C. Hale, D. G. Kobick. *Hotel:* Park Sheraton.

GISHOLT MACHINE CO. *Booth 1209.* Exhibit of Sealmatic "85" to apply precut cellulose neck-band seals on glass less than 3 in. in diameter at 120 bottles per minute; paper collar applicator arranged to apply paper collars to cartons at 750 a minute. *Personnel:* M. B. Hanks, W. E. Erickson, A. Salzwedel, A. A. Ebel. *Hotel:* Salisbury.

GOTTSCHO, ADOLPH, INC. *Booth 712.* Display of Rolaprinter 700 imprint-



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ing promotional copy in registration on waxed-paper overwraps on Package Machinery FA paper feed; Wrapaprinta imprinting contents, price and weight on Simplex bag maker; Markocoder TB coding bottle and jar bottoms; new Rolaprinter 790 imprinting cartons; new Rolacoder 210 and Rolacoder 500 imprinting codes on all four sides of cartons; new Markocoder TMT for coding can, jar and bottle tops at speeds up to 1,000 per minute; new Rolacoder 450 for coding wrap-around labels on cans and bottles at high speeds. *Personnel:* I. Gottscho, B. Olsson, E. J. Coughlin, C. Plasko, W. E. Haberland, P. Taylor, W. Tofel, L. Ziegler.

GRIFFIN-RUTGERS, INC. *Booth 601.* Exhibit of Codedge label dating and coding machines. *Personnel:* C. F. Rutgers, A. Donald, T. L. Hoshall, Jr., R. P. Anderson, M. G. Scott.

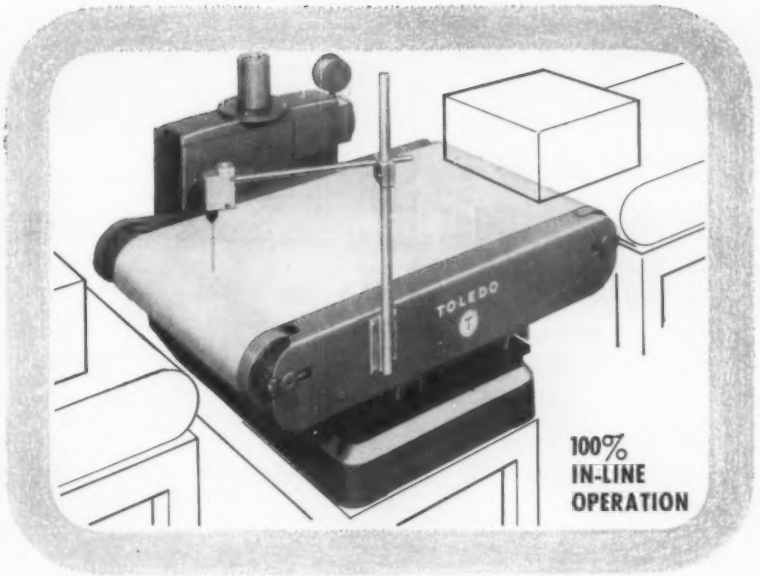
HAYSSEN MFG. CO. *Booth 808.* Demonstration of the new RT machine running polyethylene and packaging varied items, including textiles, greeting cards, carrots, pencils and others; Model G Compak machine with new automatic top-labeling attachment and net-weight scale packaging twist-wrap hard candies and automatically applying a top label as package is formed, filled and sealed; also machine wrapping textile and paper products in polyethylene.

HAYWOOD PUBLISHING CO. *Booth 604.* Exhibit of three publications, *Consumer Packaging, Industrial Packaging* and *Boxboard Containers;* literature; reprints; daily show news; reports on Packaging Institute Forum sessions. *Personnel:* M. Haywood, Jr., M. O. Pottlitzer, L. B. Bergstrom, J. Dunham, J. A. Weber, N. A. Olson, D. Dean, G. P. Haywood, J. H. Willcox, F. C. Goodrich, M. R. O'Hara, T. R. Warren, H. C. Abrahamson, D. F. McCammon, J. J. Halloran. *Hotel:* Barbizon Plaza.

HEINRICH EQUIPMENT CORP. *Booth 900.* Demonstration of newly designed Poly Matador bag machine; production of film by Reifenhauser extruder; also film printing by Film Jet flexographic press. *Personnel:* R. Sunderhauf, H. John, R. Winkler.

HESSER, FR., MASCHINENFABRIK, A.G. *Booth 819.* Exhibit of automatic bag forming, filling and sealing machine for packaging 5 lbs. of flour; it feeds pre-printed paper, registers cut-off and forms either single- or double-walled bags on a turret, fills them by means of two auger mechanisms, each filling 2½ lbs., then vibrates packages and closes and seals them with double glue application; fully automatic height adjustment compensates for volume variations of product; speed is 50 to 55 bags per minute. *Personnel:* W. Calmus, U. Bauder, H. Kappus, E. Baisch, A. Heybroek, P. M. Pottetti. *Hotel:* Barbizon Plaza.

HOLLANDER, ALLEN, CO., INC. *Booth 113.* "Ideas in Action" theme with



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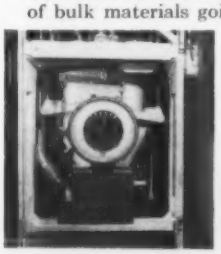

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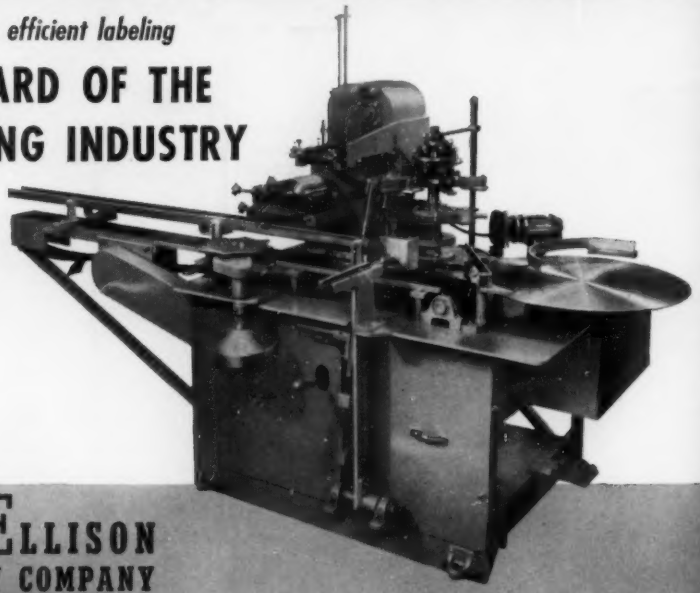

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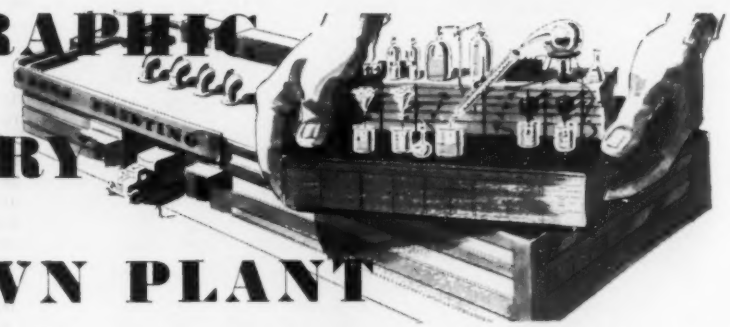

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FOR CONFINED AREAS WITH QUICK TYPE CHANGES

This unit features a readily removable type cylinder. For adding supplemental information such as flavor, color, size, or other product identification.

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practical ideas in labelation-automation; Able Stik pressure-sensitive, heat-seal, water-activated gummed and ungummed labels with and without marginal or control punch-feed holes; copies of "Ideas in Action" available. *Personnel:* S. A. Hollander, A. D. Berliss, Jr., M. F. Antoville, C. Manson, H. Siegel, S. Winston, H. Klafter, C. Frifeld, L. Levine, A. L. Berman.

HORIX MFG. CO. *Booth 1111.* Operation of new pressure filler for aerosol cans which can use air, nitrogen, carbon dioxide or other non-corrosive, non-explosive gas as the pressure medium; fills viscous products into other types of containers of various sizes and shapes, or can be changed over to gravity or gravity-vacuum operation as required by product, using same newly designed valve equipment; new walking-beam cooling unit which can be used as a cooler, pasteurizer, cooker or freezing conveyor. *Personnel:* Mrs. F. B. Fairbanks, F. B. Fairbanks, Jr., R. Wirthlin, W. H. Bulcao, R. Reno, R. McWilliam.

HUDSON-SHARP MACHINE CO., FMC Packaging Machinery Div., Food Machinery & Chemical Corp. *Booth 1005.* Exhibit of Campbell Wrapper for high-speed polyethylene overwrapping, convertible for heat sealing cellophane overwraps if desired. *Personnel:* A. J. Olsen, R. E. Jansing, Jr., M. E. De Witt, W. Raymakers, C. J. Gerlach, B. Barrette, F. Endean, B. Loskot, R. Layne. *Hotel:* Park Sheraton.

HUNTINGDON INDUSTRIES, INC. *Booth 217.* Photo displays of Porter partition assembler, a high-speed partition assembling machine used by glass companies and box shops to assemble partition strips of corrugated and chipboard at speeds up to 48 per minute with partitions up to 20 by 24 in. and 36-cell maximum capacity; "36" assembler for versatility of cell size and fast make-ready; "24" Chip assembler which assembles chipboard from 0.020 caliper through 0.090 with cell structures as small as ⅝ in. square and from 1 to 6½ in. deep; prototype of form-packer for automatic hopper feeding five-panel corrugated blank, form and glue it around 24 filled cans, with completely sealed case ready for pallet loading; box maker designed to hopper feed any knockdown regular slotted container, open it, glue the bottom, position it on can packer and automatically load 24 or 48 loose cans into carton, with operation timed to box maker; operation of Traymaker which automatically hopper feeds, glues and forms corrugated blanks into trays or telescope boxes at up to 50 per minute. *Personnel:* E. E. Marshall, J. C. Rodgers, J. E. Ullman, J. Mayhew, J. W. Honeysett. *Hotel:* Henry Hudson.

INTA-ROTO MACHINE CO., INC. *Booth 1208.* Exhibit of GM-1000 combination laminator; also information and descriptive literature available on

[*Continued on page 282*]

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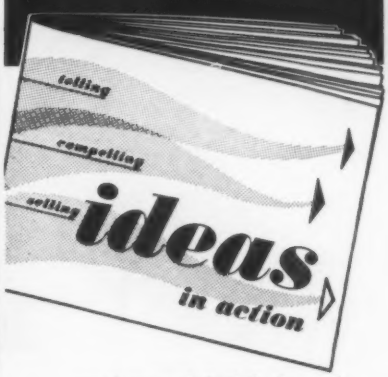

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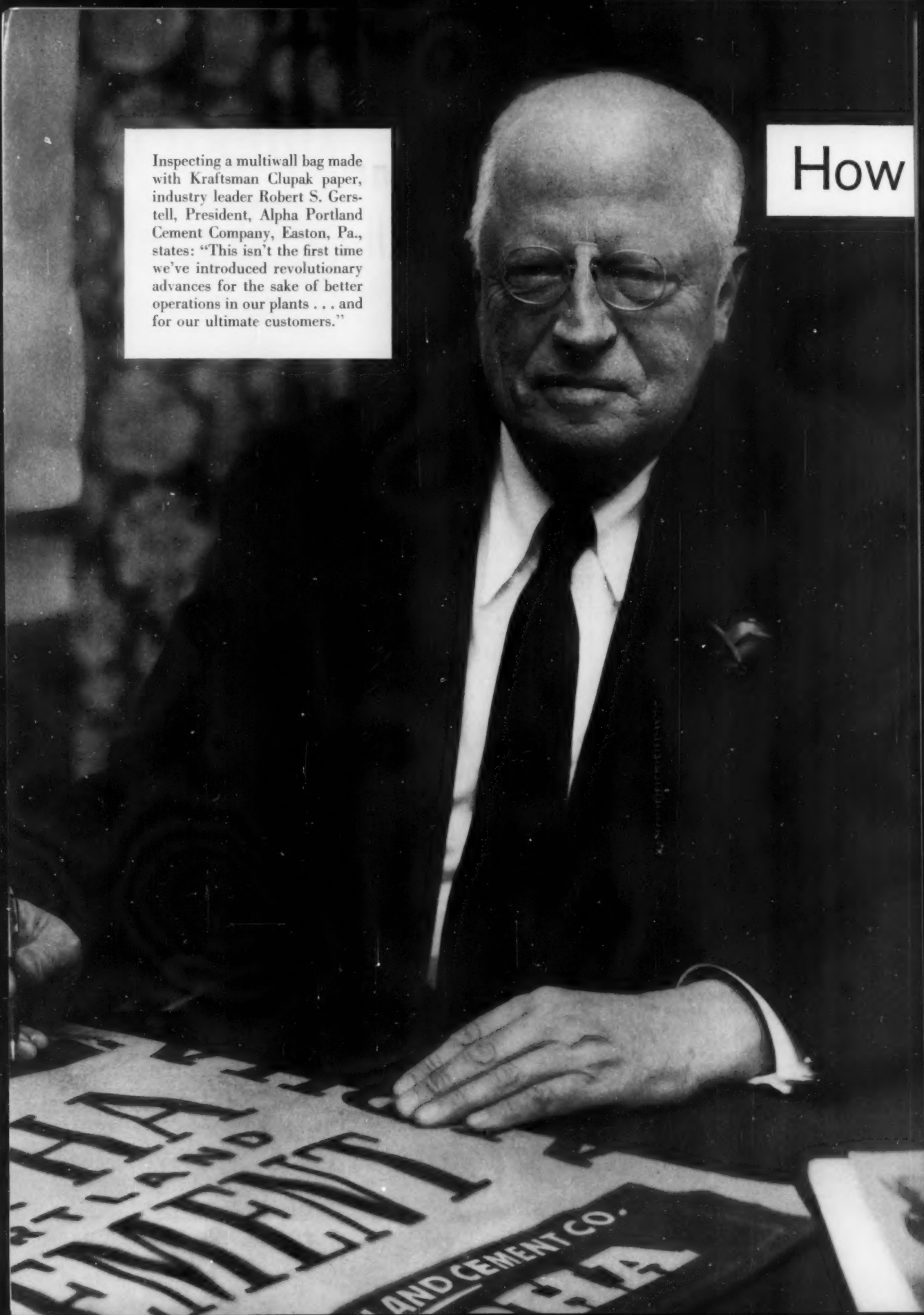
How
Inspecting a multiwall bag made with Kraftsman Clupak paper, industry leader Robert S. Gerstell, President, Alpha Portland Cement Company, Easton, Pa., states: "This isn't the first time we've introduced revolutionary advances for the sake of better operations in our plants . . . and for our ultimate customers."
AND CEMENT CO.

..and why **ALPHA CEMENT** changed to multiwalls made of **WEST VIRGINIA'S KRAFTSMAN CLUPAK* PAPER**

When the new tougher Kraftsman Clupak paper was being introduced by West Virginia Pulp and Paper Co., the Alpha Portland Cement Co., Easton, Pa., major producer of Portland and mortar cements, did its own testing.

This was only natural for a leading company in the industry—with eight plants in the East, Midwest and South. Alpha's president, Robert S. Gerstell, foresaw the tremendous possibilities of Kraftsman Clupak paper, especially in terms of customer satisfaction and operating economy. With his guidance, Alpha was the first major cement company fully to realize the potentials of this new West Virginia paper!

Alpha's purchasing agent, James I. Maguire, directed the test program which compared Alpha's then current kraft multiwalls with bags made of the new Kraftsman Clupak, the paper with the built-in stretch.

Construction of the usual kraft bags, to carry 94# of Portland cement, was 2/40, 2/50 totalling 180# paper basis weight. The new Kraftsman Clupak bags were 3/50, totalling 150# paper basis weight. This saving of 30# in basis weight gave Alpha a more economical package.

But more important—bag breakage in shipments of both Portland and mortar has become negligible! And complaints from supply dealers have been reduced to a minimum.

Today, virtually all multiwalls used by Alpha, from whatever supplier, are made of Kraftsman Clupak paper.

See how *you* can develop *moneysaving* or *money-making* uses with this unique extensible paper. West Virginia's exclusive pioneering experience with Kraftsman Clupak is at your service. Just write Kraft Paper Sales, Kraft Division, West Virginia Pulp and Paper Company, 230 Park Avenue, New York 17, N. Y.

West Virginia Pulp and Paper

**Clupak, Inc.'s trademark for extensible paper manufactured under its authority.*

TEST MASTER. James I. Maguire, Alpha's purchasing agent, says: "The success of bags made from Kraftsman Clupak paper, due to sheer toughness, was extraordinary from the start. They are not only tougher . . . they make possible realistic savings in bag costs."

PROVING GROUND #1. Actual handling of bags made with Kraftsman Clupak paper—in comparison with the old, plain kraft multiwalls—proves the superiority of Kraftsman Clupak paper. There are no problems with filling, opening, stacking or shipping.

[*Continued from page 279*]

laminators, gravure and flexographic presses, laboratory printing presses and laminators, slitters for foil, film and mounted stock, engraving services, cylinder-base service, roll coaters and paint lines, wax-bleed machines, coating machines, and customer design and engineer services. *Personnel:* A. H. Merz, O. Rich, E. A. Coudriet, A. A. Thompson, Jr., L. Haskin, D. Bischoff, Mrs. U. Sorensen. *Hotel:* Wellington.

ISLAND EQUIPMENT CORP. *Booth 809.* Exhibit of Styl-O-Matic rotary tables; Walkie-Pushie unscrambler; Enliner feeder for bottles, jars, cans and containers; unitized slide-bed belt conveyors; powered twister for round containers; automatic carton unloader for high-speed filling and packaging-line operations; flexible, low-maintenance narrow belt conveyor for assembling, packing and transporting; Styl-O-Matic bottle, jar, can and container conveyor; straight-line unscrambling table; lateral-curve bottle, jar, can and container conveyor. *Personnel:* J. W. Stiles, N. W. Gross, F. Keane, L. Hilands.

IVERS-LEE CO. *Booth 508.* Meeting place for pharmaceutical industry. *Personnel:* L. I. Volckening, J. R. O'Meara, J. P. Measday, R. W. Miller. *Hotel:* Statler-Hilton.

JONES, R. A., & CO., INC. *Booth 1015.* Demonstration of Model CMV semi-automatic cartoning machine with speeds up to 120 cartons per minute; roll leaflet folder attached to fully automatic Model CMC-300 cartoner which feeds printed leaflet from roll, cuts, folds and loads it with a metal tube into a tuck carton; also two new machines for handling plastic. *Personnel:* W. Jones, A. E. Motch, E. Minneman, J. A. Dieter, S. B. Thomson, C. A. Clause, D. S. MacCallum, W. R. Rangnow. *Hotel:* Manhattan.

KARTRIDG PAK CO. *Booth 1218.* Exhibit of new KP-1000 semi-automatic aerosol packaging line designed for small-volume manufacturer or processor. *Personnel:* G. W. Heath, G. V. Hoyt, C. N. LeBeau, R. Ferry, A. Jecker, F Craig.

KIDDER PRESS CO., INC. *Booth 104.* Photographs and literature available; place to meet and discuss company equipment and customer printing requirements. *Personnel:* R. Zuckerman, J. L. Brouwer, E. J. Peal.

KIEFER, KARL, MACHINE CO. *Booth 420.* Display of rotary pressure vacuum filler with pinpoint stems for plastic containers; rotary pressure vacuum filler with submerged filling stems; gas jet aerosol charger. *Personnel:* J. A. Rheinstrom, P. Fechheimer, P. V. V. Hurlbut. *Hotel:* St. Moritz.

KINGSBURY & DAVIS, FMC Packaging Machinery Div., Food Machinery & Chemical Corp. *Booths 1005, 1007, 1011. Personnel:* P. D. Bell. *Hotel:* Park Sheraton.

LABELETTE CO. *Booth 711.* Exhibit of

Specially developed by Crescent, K.O. Flex is the only alcohol-soluble ink for Saran-coated cellophanes that has heat resistance and can be used with natural rubber or Buna-N plates and rollers. Prints without over-lacquer and without blocking, too, and is unusually flexible. Try K.O. Flex—and watch your printing problems go down for the long count!

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Model 11A, 11B, 12A, 12B, 14A, 21A and 30A labelers; Model 11B will incorporate for first time the electronic label feeder. *Personnel:* J. G. Wesley, A. Meckenberg, S. Groudel, W. Hett, T. Lewis, T. Hoshall, W. King, T. C. Fenton, W. S. Bryan, M. Tiemann, M. Richards, L. Hollander, H. G. Santa-Cruz, F. Allen. *Hotel:* Park Sheraton.

LAKSO CO., INC. *Booth 400.* Exhibit of new multi-purpose electronic counter which counts tablets or capsules regardless of shape or size; Model 52 automatic cottoner, which cottons complete range of pharmaceutical bottles at any speed range up to 100 bottles per minute; Model 56 inspection machine for inspecting tablets or capsules and other small objects prior to packaging. *Personnel:* E. Lakso, G. Lakso, R. Zeidler, W. Dempsey, T. Hallfors, G. Saari, R. Hendrickson. *Hotel:* Essex House.

LONG & CO., INC. *Booth 1204.* Exhibit of automatic Model 4-A Atlantic labeler to apply both spot and complete wrap-around labels to bottles, cans, aerosols, jugs, etc., featuring escapement which feeds one container at a time, an automatic pressure roll to press down label and automatic ejection of labeled container; semi-automatic Atlantic labeler to apply both spot and wrap-around labels to cylindrical containers ranging in size from several ounces to 5 gal.; also Model 6-P Atlantic labeler to place die-cut labels on gallon cans with ears, and other size containers using both spot and wrap-around labels. *Personnel:* M. A. Long, D. I. Long, M. K. Itneyer. *Hotel:* Barbizon Plaza.

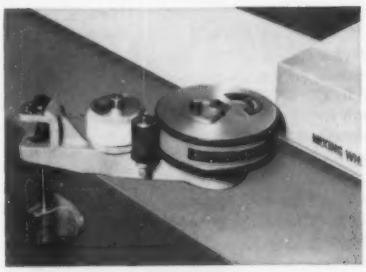
LYNCH CORP. *Booth 916.* Exhibit of Model BW, Model BK, Robo-Wrap machine and Stretch Pack machine. *Personnel:* A. V. Peterson, M. J. Czarniecki, Jr., B. J. Scholl, C. B. Pierce, F. G. Lenhart, R. N. Craven, G. Browder, Jr., R. D. Beyer, R. F. McVicker, R. D. Aumend, W. J. Reynolds, K. E. Olsen, O. R Bowers, O. D. Woods, B. Johnson, J. Travis. *Hotel:* Plaza.

MACHINERY SERVICE CO., INC. *Booth 1000.* Exhibit of MS combination feeder-cleaner; also MS semi-automatic portable vacuum filler and air-cleaning equipment.

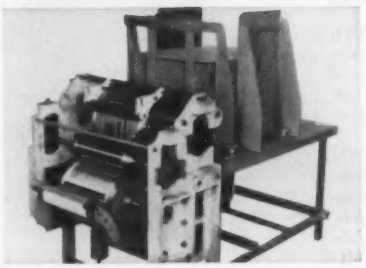
MARATHON, Div. of American Can Co. *Booth 731.* Demonstration of new Tux carton with machine to load, close and seal the package at loading speeds of from 10 to 50 cartons per minute; the range of the company's package manufacturing services and examples of printing by offset, rotogravure, letterpress or flexographic processes on paper, paperboard, films or foil will be displayed as well as laminations and combinations of coatings which can be used to add protection, heat-sealability and point-of-purchase appeal to packaging. *Personnel:* K. G. Houts, R. C. Clark, P. L. Anthony, R. E. Taggart, F. L. Broeren, P. R. Rundquist, R. A. Farrell. *Hotel:* Essex House.

[*Continued on page 284*]

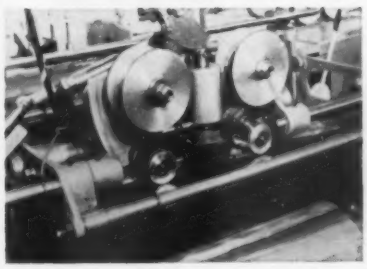
Make these IME machines your standard for comparison in marking, dating and coding equipment



WHIPPET MARKER® automates imprinting of conveyor-carried containers of all types. Driven by the conveyor and self-inking, it marks your containers as you use them. Attaches easily to any conveyor line.

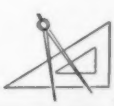


#7 AUTOPRINTER® automatically imprints one or both sides of cartons and multi wall bags at speeds up to 3000 per hour. Prints clear impressions on any flat, absorbent surface regardless of minor surface variations.



RAINBOW CODER® offers you a wide color range in sharp, clear, controlled impressions on any surface that will accept hot roll leaf imprinting. Designed to be synchronized with speed of the packaging machine, it requires no operator, no ink, no makeready and very little maintenance.

Before you buy any marking or imprinting machine be sure to check on the I. M. E. line. These machines set the standards...for speed...for versatility...for rugged durability . . . for accurate, clear imprinting. You can find cheaper machines, but you can't find better dollar-for-dollar value in long-run economy and trouble-free, efficient service! Write today for our new catalog — it's yours for the asking. Department M.P.



UNUSUAL PROBLEM? If you have a special problem in product handling or identification, remember this: IME offers complete design and engineering services.

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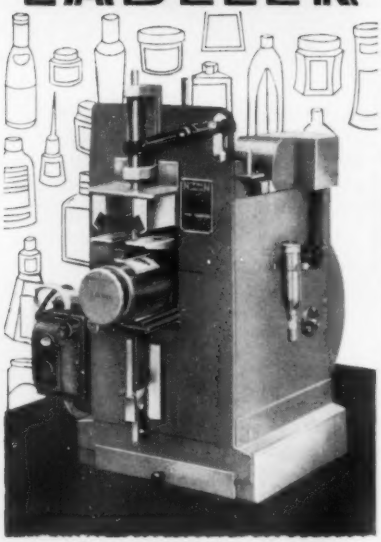

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- **Takes unlimited shapes of containers & labels.**
- **Change over for labels or containers in minutes.**
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Title .....
City ..... Zone .... State .....

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incorporated
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Chicago 45, Illinois

[*Continued from page 283*]

MARKEM MACHINE CO. *Booth 1114.* Industrial marking machines on display. *Personnel:* R. C. Mensel, S. M. Wright, J. Lyon, J. Kelen, H. Lampman, S. Raymond. *Hotel:* Barbizon Plaza.

MARTIN ENGINEERING CO. *Booth 706.* Exhibit of "Vibrolator" electric, pneumatic, ball type, silent vibration inducers for movement, compaction or sifting of materials, parts, slurries or concretions; full line of vibration accessories and mounts; also new model CCVP 3000 hopper car shaker. *Personnel:* E. F. Peterson, E. H. Peterson, W. J. Dougherty, Sr., M. Peterson, W. E. Dougherty, Jr. *Hotel:* Henry Hudson.

MERCURY HEAT SEALING EQUIPMENT CO. *Booth 612.* Exhibit of new Low-Boy Verti-Pak with scales, showing the packaging, weighing, filling and sealing of nut meats; also new VLS-12 label sealer equipped to hole punch, date code, price imprint, label and eject a bag automatically. *Personnel:* O. May, J. Dreeben, L. Dreeben, H. Cook, W. Scanlon, W. Green, R. Stone. *Hotel:* St. Moritz.

MILLER HYDRO CO. *Booth 314.* Exhibit of new high-speed case and carton packer for packing all sizes and shapes of bottles, jars, cans, flasks, etc. *Personnel:* H. H. Nussbaum, M. H. Nussbaum, B. W. Nussbaum, D. Shields, L. F. Shattuck, J. A. Olive, V. Custer, S. H. Minhinnick. *Hotel:* St. Moritz.

MILLER WRAPPING & SEALING MACHINE CO. *Booth 1001.* Model MPS wrapping machine for wrapping wide variety of package sizes and types in heat-sealing cellophane and in cellophane sealed with glue; also Corley-Miller Model KW-16 Kwik-Wrap sheeter which sheets a wide variety of films and foils in direct conjunction with hand-wrapping operations. *Personnel:* M. H. Corley, J. Corley, B. Freeman, F. Faletti, P. Freeman, J. Hagberg, F. Kocarek. *Hotel:* Mayflower.

MILPRINT, INC. *Booth 304.* Display of variety of packages representative of the industries served; emphasis on technical aspects of modern packaging, such as extrusions and laminations; packages which have solved specific technical problems involving product, packaging machinery, printing process and package itself. *Personnel:* A. Snapper, R. Ewens, S. Rosen, W. Hullinger, P. Hultkrans, R. Hanson, A. Miller. *Hotel:* Roosevelt.

MODERN PACKAGING. *Booth 417.* MODERN PACKAGING Magazine, the MODERN PACKAGING *Encyclopedia Issue* and other Breskin Publications featured; a place to meet and visit with the magazine staff. *Personnel:* C. A. Breskin, A. S. Cole, J. M. Connors, R. C. Beggs, P. H. Backstrom, S. S. Siegel, R. C. Nilson, B. R. Stanton, T. B. Breskin, P. W. Muller, M. Stoller, L. Stouffer, T. M. Jones, P. Hagens, W. C. Simms,

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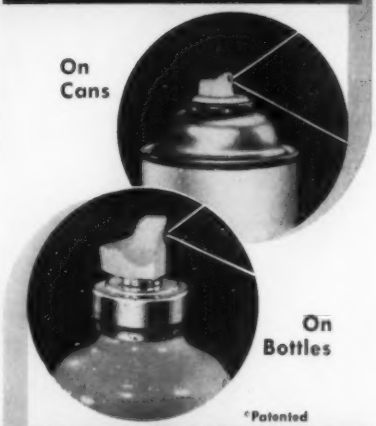
MICRO-MIST* VALVES

Make New Aerosol Products Possible



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1. COMBINES THE DESIGN ADVANTAGES OF THE RISDON VALVE WITH THE FIRST AND FOREMOST MECHANICAL ATOMIZING ACTUATOR.
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7. GREATER FORMULATION LATITUDE AND ECONOMY—MICRO-MIST'S double diffusion effect facilitates greater formula variations in quantity and type of propellant.
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A LusterBoard package that sticks in your mind

For eye-arresting power, few designs can compare with Minnesota Mining and Manufacturing Company's Scotch-plaid trade mark. One of the reasons for its effectiveness on this particular package is LusterBoard. Witness the color reproduction. Sharp. Clear. Makes the package stand out on the shelf. Today, hundreds of other companies are looking to LusterBoard to give added zest to their product packaging. Here are a few common-sense reasons why: ★ Maximum fidelity of halftone reproduction ★ Fast ink setting ★ Smooth folding, superb embossing effects ★ Range of 14, 16, 18, 20 and 22 point thickness. Samples, demonstration pieces, and technical information are available from: *S. D. Warren Company, 89 Broad Street, Boston 1, Massachusetts.*

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NEW Spherical Disposable Containers

TO PUT PRESSURE BEHIND YOUR SALES

● Manufacturers, fillers, distributors, dealers, and users are discovering new sales appeal, new convenience, new compact size with TMC Spherical Pressure Containers.

They open new marketing opportunities for fire extinguishers, oxygen resuscitators and an infinite variety of other products. Distinctive spherical shape provides the most economical container in size... in capacity... in working pressure ... and in low cost.

TMC spherical containers are made in high volume to precision standards that fit automatic filling machines. Write or phone for full information on these new containers for your product.

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- All containers individually tested under water.
- Available in choice of colors.
- Write, phone or wire giving size and pressure requirements.

Millions of TMC King Size Disposable Containers Are Building Sales!

TMC King Size cylindrical containers have become standard of the Aerosol Industry. They are made in standard sizes of 55, 75 and 132 cubic inch capacities. Special sizes quoted on request. Write or phone for Selection Guide No. DC-559.

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R. Kelsey, G. Tarragano, R. R. MacBride, F. Getter, C. A. Southwick, Jr.

MORNINGSTAR - PAISLEY, INC. *Booth 1123.* Display panel featuring "Adhesives of All Types for Every Packaging Application." *Personnel:* M. Stempel, E. C. Lenz, S. Schuller, D. Bookshester, P. M. Liner, I. G. Nichol, A. Mayer, E. Bearman, H. Miller, M. Stempel, Jr., D. Liner, K. Wagner.

MRM CO., INC. *Booth 204.* Display of Model CM fully automatic labeling machine, adjustable to accommodate single-panel labels to various-shaped containers from 1 oz. to 1 gal., at speeds from 40 to 150 containers per minute; fully automatic gravity rotary-filling machine for filling of free-flowing, semi-viscous and foaming liquids, adjustable for full range of plastic, metal and glass containers from fractional ounces to 1 gal. with speed range from 40 to 400 per minute; semi-automatic gravity and vacuum-filling machines. *Personnel:* H. D. Manas, R. J. Dealy, R. Mishkin, R. Siegele, R. Manas, F. Rossetti, L. Orlick, P. Palotta, G. De Carlo.

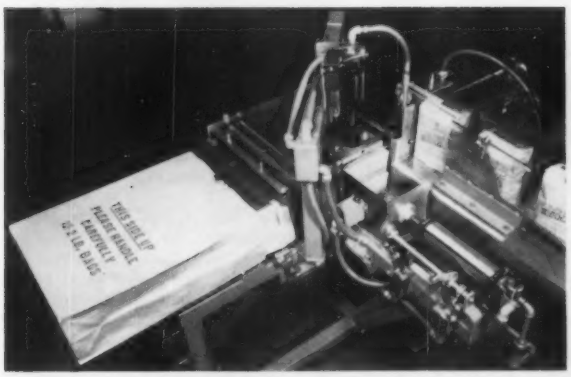
NATIONAL EQUIPMENT CORP. *Booth 216.* Exhibit of Short-A-Matic case sealer; Rose F.W.T. Triumph form, cut and twist wrapper; Rose 5 I.S.T. for wrapping irregular-shape hard candy; Speed Wrap; also Chaffee Rotor-Sealer. *Personnel:* H. Greenberg, S. Greenberg, J. Debrouner, C. Greenberg, R. Greenberg, S. Goldstein, W. H. Kopp.

NATIONAL FLEXIBLE PACKAGING ASSN. *Booth M-4.* Exhibit of 100 outstanding prize-wining packages from the 4th National Flexible Packaging Competition with full details on who designed and made them, their unique features and why they won an award. *Personnel:* J. M. Cowan, F. S. Donaldson. *Hotel:* Waldorf Astoria.

NATIONAL STARCH & CHEMICAL CORP. *Booth 1200.* Exhibit of hot-melt extruder for high-speed bonding of difficult-to-adhere combinations such as polyethylene to polyethylene, polyethylene to kraft, or polyethylene to foil; Easi-Clean resin adhesives for bonding of wide assortment of packaging materials; new chemically modified casein bottle-labeling adhesive, Chemtite, used in brewing industry. *Personnel:* W. Becker, W. Blake, J. C. Clay, J. Dillon, W. East, I. Fischer, T. Flanagan, S. Gold, B. Gordon, F. Greenwall, W. Hanson, I. Kaye, L. Klempner, R. Matts, R. C. McGaffin, J. McGinley, T. Newman, A. Norman, D. Pascal, E. Schwartz, W. Sederlund, E. Sjoden, G. Stahl, S. F. Thune, R. Weidener, C. W. Witzmann. *Hotel:* Statler-Hilton.

NEW JERSEY MACHINE CORP. *Booth 1107.* Demonstration of semi-automatic Pony LabelDRI with electric-eye roll-label feed and label code imprinter; also new capping station for Pony Express automatic labeler for capping and labeling at speeds up to

CUT YOUR PACKAGE BALING COSTS



50 to 80%

The Bowes Automatic Package and Bag Baler is saving thousands of dollars annually for industries whose products are packaged and then baled for distribution. This new patented machine pays for itself in **one year.**

The Bowes Automatic Package and Bag Baler's fully automatic operation not only provides smooth, effortless and fast baling of packages and bags, but requires the services of only ONE attendant (male or female) at the machine. Obsoletes all previous costly methods of baling.

The Bowes Automatic Baling Machine is ideal for and in use on the packaging lines of the following industries:

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- ★ SUGAR
- ★ COFFEE
- ★ FLOUR and MEAL
- ★ ANIMAL FOODS
- ★ PAPER and PAPER PRODUCTS
- ★ CONTRACT PACKAGING
- ★ CHEMICAL
- ★ CHARCOAL
- ★ FERTILIZER
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FIBER CONTENT is no problem when you make use of the full line of labels, tags, versatile machines and marking methods designed by **SOABAR**

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Soabar COMPANY

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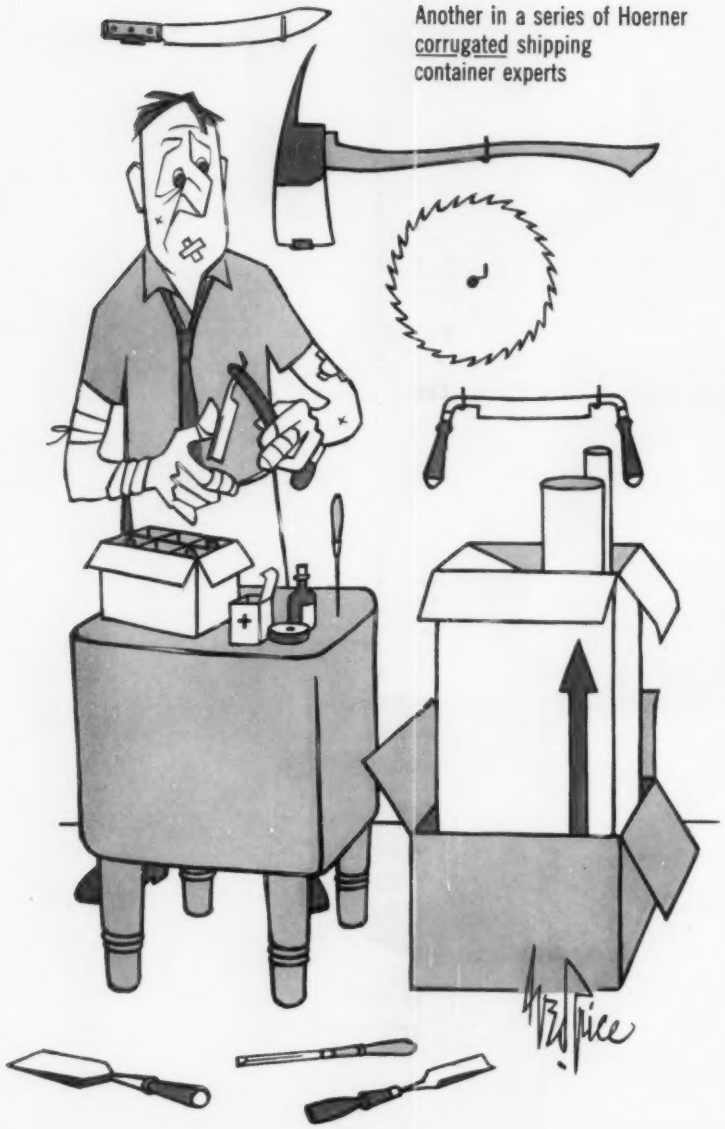

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He has his problems. But he always solves them with ingenious use of corrugated. He solves problems for manufacturers, too. Cuts out excessive shipping material and labor costs. Whittles shipping damage down to nothing. If packaging and shipping problems are slicing your profits, call the nearest Hoerner Office.

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65 bottles per minute in one integrated operation. *Personnel:* G. W. von Hofe, D. Wellbrock, A. Schaefer, H. Voltmer, K. Neimeier, D. Tank, P. Heguy, M. Smith, J. Brown, K. Leeson, B. Droge, R. Keller. *Hotel:* Essex House.

OLIN MATHIESON CHEMICAL CORP. *Registration Area.* Message center with literature on company cellophane and polyethylene, main service to be to take telephone and other messages for visitors, association members and exhibitors at the show; also Dow-Jones news ticker offering market quotations, sports and world news. *Personnel:* G. R. Johnson, E. L. Holloway, E. B. Beeks, J. C. Mertes, C. D. Mollo, L. E. Simerli, R. L. Corbett.

OLSENMARK CORP. *Booth 520.* Exhibit of roll-leaf and Kensol roll-leaf stamping equipment; complete line of lightweight, medium- and heavy-duty equipment for marking plastic and non-plastic containers. *Personnel:* M. A. Olsen, F. J. Olsen, J. Verzera, W. Rowbottom.

PACKAGE MACHINERY CO. *Booth 805.* Operation of new Transwrap TWS-75, automatic bag forming, filling and sealing machine; new high-speed (500 per minute) Forgrove twist wrapper; also Model U-6 machine for overwrapping different-size cartons. *Personnel:* R. L. Putnam, L. A. Curtis, H. Mosedale, Jr., E. W. Forth, J. M. Chalfant, J. B. Garrett, E. Hjelm, R. Lyons, P. Gillis, W. Keil, M. Neis, R. Blumer, L. Evans, E. McCall, T. Jefferson, J. Egan, J. Bradford, W. Maybury. *Hotel:* Barbizon Plaza.

PACKER MACHINERY CORP. *Booth 120.* Exhibit of Model PVA fully automatic straight-line vacuum filler; also Model PJ-1 semi-automatic straight-line vacuum filler. *Personnel:* B. Misbin, R. Q. Feldman, R. Iversen, K. Horvath.

PAK-RAPID, INC. *Booth 1027.* Continuous-motion, high-speed machine on display. *Personnel:* B. Karpowicz, J. Irvine, J. Coakley, T. Porter, G. Rawak, K. J. Kortvelesy, R. Ware, G. Libby. *Hotel:* Henry Hudson.

PAMARCO, INC. *Booth 215.* Display of Evenflo engraved applicator rolls; embossing rolls; gravure cylinders; Micro-Lok demountable plate cylinders; integral rolls. *Personnel:* D. Killary, W. D. Donohue, S. A. Brown, C. Henderson, C. Heurich, E. Nathan, F. Karlquist, D. Donelan, B. Segermark.

PAPER CONVERTING MACHINE CO. *Booth 511.* Illustrations of new six-color flexographic press with samples of polyethylene and cellophane being printed; also metal-plate and rubber-plate letterpress units and other converting equipment. *Personnel:* R. Small, T. Ketcham. *Hotel:* Commodore.

PETERS MACHINERY CO. *Booth 303.* Display of completely new carton and tray forming and gluing machine; im-

THE MOST COMPLETE LINE OF UNSCRAMBLERS!

Styl-O-Matic
ROTARY UNSCRAMBLER

Cartons of round bottles, jars, cans or containers are inverted onto the tilt-top table. Contents are pushed onto revolving disk and *automatically* dispatched in single file to the conveyor. Also available with pallet feed for anti-biotic containers.

Styl-O-Matic
STRAIGHTLINE UNSCRAMBLER

Cartons or cases of bottles, jars, cans or containers dumped onto table are instantly unscrambled and regimented into a single file to keep a continuous flow of units on your production line.

Styl-O-Matic **High Speed**
WALKIE-PUSHIE UNSCRAMBLER

Accommodates almost any size or shape container at speeds up to 400-450 per minute. Bottles, jars, cans or containers are unscrambled *without agitation*, and no scuffing or contact when discharging. High speed, very gentle handling is assured. Available also in twin units.

Styl-O-Matic
SURGE TABLE

An accumulating table that is placed at a point in the conveyor production line to receive and hold round bottles, jars, cans or containers when succeeding equipment is momentarily shutdown.

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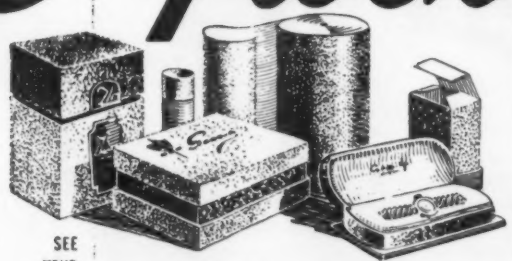
CLAREMONT Flock



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EASTERN PLANTS: 490 BUTLER ST., SOUTH HACKENSACK, N. J.

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NOW you can **RENT**
This Brand New
"SKIN-PACK" OR
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for only **$65** PER MONTH
Purchase Plan Also Available

This production machine including pre-loading table, skin packaging unit and cutting table can add real showmanship and salesmanship to your product. Skin Packaging . . . wanted, needed, requested by supermarkets, self service outlets, armed forces is now fast, easy, economical to run.

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Fast, Economical Complete Service on Your **MASTER CARDS (Printed, Coated, Scored) READY FOR SKIN OR BLISTER PACKAGING.**
You send us the artwork . . . we do all the rest.
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SALES-SERVICE OFFICES IN ALL PRINCIPAL CITIES

proved high-speed forming and gluing machine; latest carton-closing machine; also cellophane sheeter and stacker. *Personnel:* H. L. Greene, J. Boehler, W. P. Imhoff. *Hotel:* Statler-Hilton.

PNEUMATIC SCALE CORP., LTD. *Booth 307.* Exhibit of bottling line consisting of unscrambler, air cleaner, rotary filler and 6-Hd capper units; Carbert Model 60 tube filler and sealer as well as new plastic-container sorting and feeding machine and Colletta bench-labeling unit; also large display of samples to illustrate operations of equipment being offered to packaging and bottling industries. *Personnel:* W. E. Coughlin, N. S. Ross, A. T. Buskens, R. H. Eiff, H. H. Conklin, G. J. Ross, R. W. Coughlin, H. Foster, J. Yates, F. E. McIntosh, O. H. Hultin, R. W. Saumsiegle, R. L. Hewson. *Hotel:* Park Sheraton.

POPPER & SONS, INC. *Booth 1119.* Packaging equipment for the drug and cosmetic industries on display, including high-speed liquid fillers, washing equipment, automatic plugging machines, tablet and capsule counting equipment, tablet inspectors, chip and powder removers, high-speed folding-box imprinters and fully automatic silk screener. *Personnel:* R. A. Popper, W. L. Popper, J. M. Cozzoli, S. Rozenberg.

PRINT-A-TUBE CO. *Booth 509.* Exhibit of boilable packages; polyethylene-on-Mylar and polyethylene-foil combinations; skin-packaging films; also fully automatic skin-packaging machine. *Personnel:* B. Lechner, J. Field.

RESINA AUTOMATIC MACHINERY CO., INC. *Booth 203.* Exhibit of screw-capping machinery; fitment-applying machine; also special plug inserter. *Personnel:* S. Resina, A. Heller, A. G. McAdams, A. DeBastos, B. Vazquez. *Hotel:* Park Sheraton.

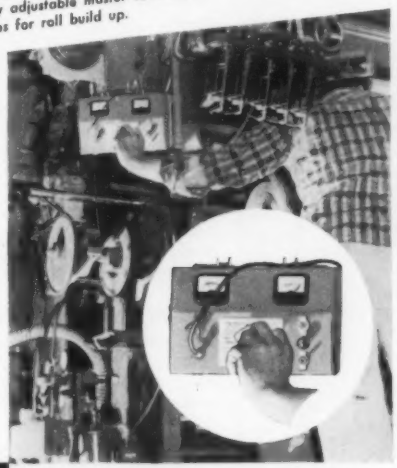
REYNOLDS METALS CO. *Booth 404.* Demonstration of aluminum foil tuck wraps and plug lids being applied to aluminum containers with fully automatic, semi-automatic, pneumatic and hand-closing equipment; also samples of aluminum foil overwraps, labels, pouches, containers and aluminum foil cartons. *Personnel:* P. Murphy, C. Davis, D. Ostroot, J. M. Stuart, P. Dearborn.

RIEGEL PAPER CORP. *Booth 1211. Personnel:* C. E. Schaehrer, N. W. Postweiler, C. W. Hoffman, J. Shields, W. M. Riegel, E. G. Penn, R. A. Simpson, R. W. Schlienz, T. G. Biggam, V. D. Brown, A. B. Christensen, W. F. Collins, J. W. Conley, G. R. Hastaba, R. H. Lippincott, J. M. Male, P. W. Orvis.

ROBERTSON PAPER BOX CO., INC. *Booth 116.* Exhibit of Quik Form carton-forming machine with rapid change-over from size to size which requires no glue, having blank pre-coated with a thermosetting adhesive and de-

TENSION MASTERY and WEB ALIGNMENTS

Shown on the latest "Heinrich High Speed Printer", the Web Rewind Tension Control, with manually adjustable master controls, becomes completely automatic and compensates for roll build up.



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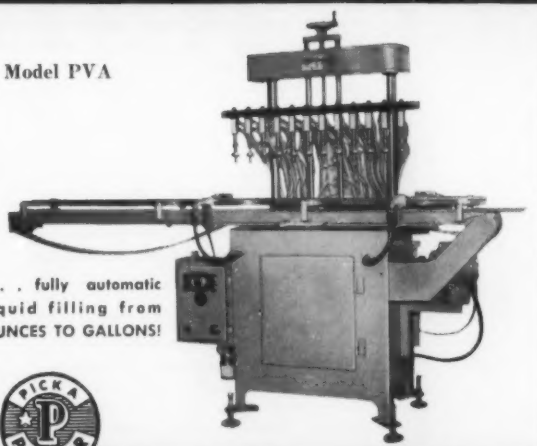

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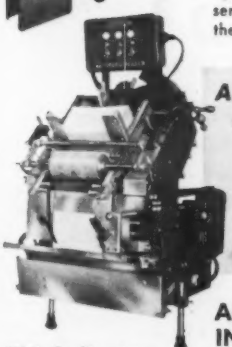
At last, a polyethylene package that is easily opened! And the *whole* package remains to serve as a dispenser-container after parts of the product have been removed.



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signed to handle one-piece boxes with hinged cover and two-piece telescoping boxes at speeds of up to 1,000 per hour. *Personnel:* G. E. Fitzgerald, C. W. Redden, E. F. Mayglothling, E. J. Bonville, Jr., J. R. Sleininger, R. E. Brandt, E. H. Kohlschreiber, W. G. Bergman, D. W. Kimball, N. E. Humphreyville, G. E. Staub, J. L. Crowley. *Hotel:* Essex House.

SAGA PACKAGING MACHINERY DIV., A & M Tool & Die Co., Inc. *Booth 736.* Exhibit of 22-station metal-tube filling and crimping machine; 22-station grease-cartridge filling and capping machine; hand sealer for polyethylene tubes; also high-frequency vinyl-tube sealing attachment. *Personnel:* S. Simonelli, A. Aliberti, A. Loconto, G. Simonelli, P. A. Porter, E. Simonelli. *Hotel:* St. Moritz.

SCANDIA PACKAGING MACHINERY CO. *Booth 1022.* Demonstration of new Model 508 semi-automatic wrapping machine designed to wrap extra-large-size packages such as candy boxes, children's games, photographic paper, stationery sets, etc., at speeds up to 45 per minute; newly designed Model 107 automatic wrapping and bundling machine with new adjustable bundle-collator attachment for taking individual packages and automatically grouping them in collations of from two to 12 for multiple wrapping or bundling, at 60 collations per minute; new Model 609 high-speed automatic wrapping and multiple-wrapping machine for products sold through supermarkets, offering quick adjustability over a wide size range of single packages and multiple-pack collations; new high-speed, turret-type automatic wrapping machine, Model 711, with quick adjustability for a wide range of small package sizes, of special interest to the confectionery and drug industries; Model 804 high-speed automatic kraft-paper bundling machine featuring flexographic printing unit, tape-opening attachment and high-speed collator attachment; new Model 401 "Pocket-Packer" for cigar industry which automatically forms and seals carton blanks around five cigars prior to overwrapping in cellophane, at speeds up to 75 per minute; polyethylene sealing attachments for mounting on company-built wrapping, multiple-wrapping and bundling machines; also varied assortment of packages, multiple packs and "deal" packs will be on display. *Personnel:* W. Bronander, E. Brooks, D. DeLoca, I. Menner.

SCHJELDAHL, G. T., CO. *Booth 504.* Exhibit of S-16 T side-weld bag machine capable of running two separate printed webs simultaneously for either tubing or sheeting; new rotary-drill perforator; single punches; spot sealers; also other auxiliary attachments. *Personnel:* G. T. Schjeldahl, G. Bowers, J. S. McClintock, M. Novotny, J. Womack, T. Glaser. *Hotel:* St. Moritz.

SCHOOLER MFG. CO. *Booth 826.* Automatic and semi-automatic wrapping

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machines and new automatic bander on display. *Personnel:* J. T. Schooler, H. Sibner, F. Eckert, J. Madden, H. McMackin, W. McCambridge.

SCHROEDER MACHINES CORP. *Booth 403.* Exhibit of Quadnumatic combination four-machines-in-one which automatically opens and forms corrugated cases, accumulates product in proper pattern, injects load into the case, glues and seals, delivering finished case ready for shipment; Duo-Formnumatic which automatically opens and forms corrugated cases at up to 30 per minute, which is also available with automatic registering device to place opened and formed case onto funnel of an existing packer; automatic Caforms corrugated cases at up to 30 per rugated case after it has been manually packed within the magazine of the machine. *Personnel:* A. C. Schroeder, R. F. Schneider, A. C. Schroeder, Jr., B. Nagy, C. J. Grant, Jr., O. A. Tomei. *Hotel:* Park Sheraton.

SHOPSIN PAPER CO. *Booth 603.* Exhibit of new Super Mirror foil; silver, gold and colored foils laminated to both gummed and ungummed paper on tag stocks and boxboard; also specialty laminations. *Personnel:* M. Shopsin.

SIMPLEX PLANT, FMC Packaging Machinery Div., Food Machinery & Chemical Corp. *Booths 1005, 1007, 1011.* Operation of new Model 210 side-weld bag-making machine with twin-folding unwinds and split draw rolls to manufacture side-weld bags from two separate printed webs at production speeds of 170 to 220 bags per minute; also on exhibit a new stacker. *Personnel:* G. C. Jones, J. D. Hoffman, D. A. White, G. A. Rowe, R. D. Zolte. *Hotel:* Park Sheraton.

STANFORD ENGINEERING CO. *Booth 119.* Exhibit of web guides, rewinders, unwinds and rewinds; new heavy-duty turret unwind unit for handling rolls of paper, foil and paperboard. *Personnel:* W. T. Stanford, Wayne T. Stanford, O. E. Stanford, R. W. Payton. *Hotel:* Taft.

STOKES & SMITH PLANT, FMC Packaging Machinery Div., Food Machinery & Chemical Corp. *Booths 1005, 1007, 1011.* Exhibit of new high-speed, electronic check weigher which automatically weighs, classifies and segregates packages at speeds up to 400 per minute, with three-way reject system which separates overweights, underweights and acceptable weights; Sig automatic bag filling and sealing machine which opens, fills and closes prefabricated bags at speeds of 35 to 55 per minute, equipped with net-weight scales for coffee, rice, tapioca, sugar, flour, etc., in 4-oz. to 2-lb. sizes, using either satchel-bottom, lock-bottom or square bags. *Personnel:* W. R. Huguenin, J. R. Sonneborn, S. T. Brinton, R. C. Smith, J. S. Stokes, J. Y. Albertson. *Hotel:* Park Sheraton.

[*Continued on page 297*]

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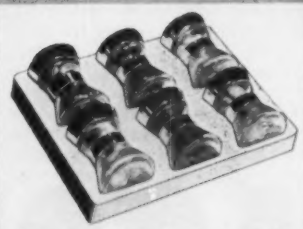
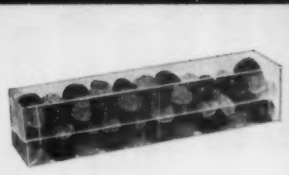
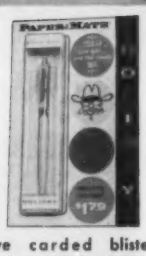


Thermoformed plastic box insert designed for ABBOTT LABORATORIES



Crystal clear acetate box mass produced for MRS. SNYDER'S Minty Mites



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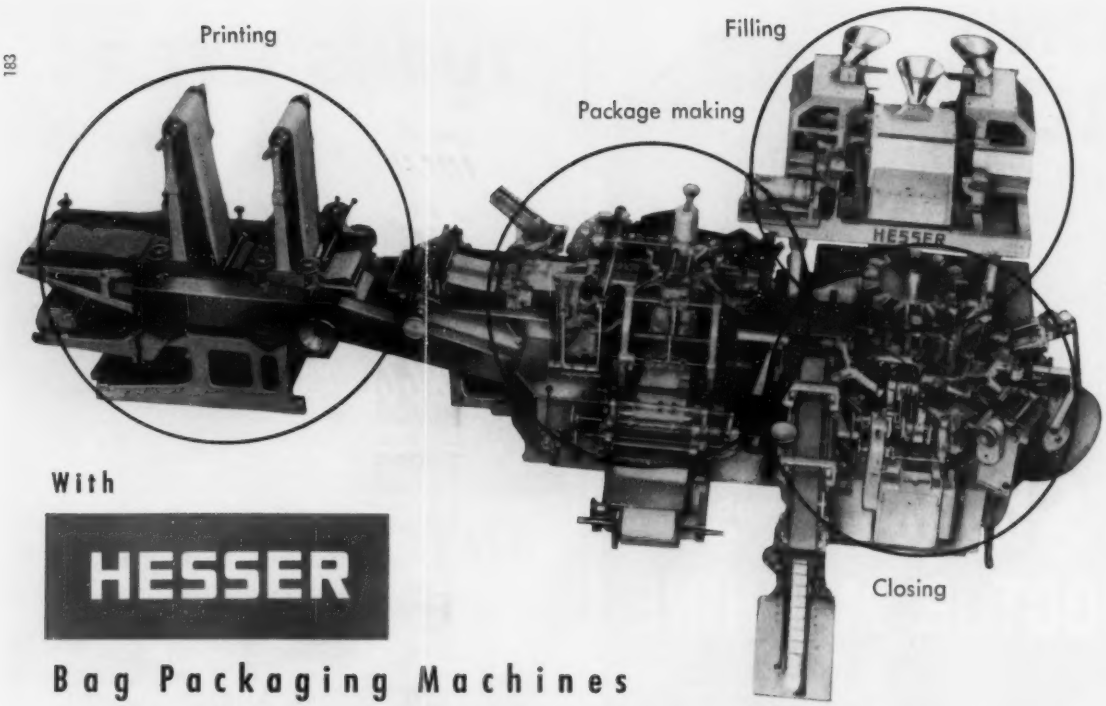

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Bag Packaging Machines

from the unprinted reel to the ready-made package - the most economical way of packaging.

Types of Bags: double walled bags and single walled bags

Making, filling, and closing of bag packages in one fully automatic operation,

the outer paper can be printed in the machine in up to 3 aniline colors or it can be fed from the pre-printed reel and registered by means of a photo-electric eye. The inner paper can be glued or heatsealed.

HESSER machines are equipped with **automatic double precision weighers** for products like sugar, rice, coffee beans, ground coffee, tea, oat flakes, macaroni products etc.

with adjustable **volumetric auger fillers** for products like flour, icing sugar, milk powder, cocoa powder, pudding powder, baby food, finely ground coffee etc.

with **volumetric plate type fillers** for products like salt, sugar, rice, small macaroni products, tea dust etc.

Machine Speed depending on size of package, and filling material, up to 80 packages per minute.

Floor Space: abt. 11½' by 19' (with printing attachment).

Personnel: 1 person for attending the machine,
1 person for taking the ready-made packages from the discharge.

Products a **high speed machine** is available with an operating speed of up to **200 bags per minute.**

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[Continued from page 294]

SUNDSTRAND-AMERICAN BROACH DIV., Sundstrand Corp. *Booth 720.* Exhibit of Sundstrand-Packmaster Model 58 thermoforming blister machine; Model 50-A adjustable heat-sealing pouch machine; also Brown multipak liquid packeter and Multi-Formapak. *Personnel:* D. W. Branning, W. E. Balzer, J. A. McCollum, E. Cox, C. Kern, B. Gustafson. *Hotel:* Barbizon Plaza.

SWIFT & CO., Adhesive Products Dept. *Booth 308.* New packaging adhesives for canning industry including resin lap-end pastes, hot pick-up gums, high-speed water-resistant case sealing, and easy-open case sealing; new easy-cleaning high-speed resins for packaging machines; also new high-heat-resistant laminating adhesives. *Personnel:* S. E. Carroll, W. W. Truxes, A. W. Boyd, M. L. Lundt, H. R. Adamson, C. S. Young, C. F. Patterson. *Hotel:* Park Sheraton.

TOMPKINS' LABEL SERVICE. *Booth 608.* Exhibit of pressure-sensitive, heat-seal, bag header, greaseproof inserts, gummed and ungummed labels on food and non-food containers, cans, boxes, etc.; continuous roll labels and single-cut labels for use with all types of high-speed automatic labeling equipment; demonstration of new Pres-To-Mark marking machine for fast imprinting of labels with price, code, variety, etc., in one operation. *Personnel:* J. Tompkins, W. Baile, R. Norris, W. Schlegel, E. Friday, D. Wright, R. Rousseau, R. Heyden, R. Kehoe, R. Guy, H. Bradley. *Hotel:* Barbizon Plaza.

TRIANGLE PACKAGE MACHINERY CO. *Booth 1120.* Exhibit of Elec-Tri-Pak net weigher with new auxiliary feed; automatic bag making, filling and sealing machine equipped with three net-weight scales; also automatic bag maker with turret feed to handle hardware and similar items. *Personnel:* R. L. Muskat, W. P. Muskat, K. Klopfenstein, F. Gillian. *Hotel:* Commodore.

UNION PASTE CO. *Booth 1223.* Exhibit of two new adhesives for cellophane-bag manufacturers; a foil-laminating adhesive; line of high-gloss scuff-resistant paper and board coatings. *Personnel:* A. B. Crowell, Jr., R. F. Radar, F. V. Sebbard, R. C. Brink, J. S. Ramseyer, H. H. Richards, R. C. Valcovic. *Hotel:* Park Sheraton.

U. S. AUTOMATIC BOX MACHINERY CO., INC. *Booth 1104.* New model C-24 cartoning machine for ¼-lb. and ½-lb. candy cartons. *Personnel:* O. W. Wikstrom, Jr., C. Fasch, O. Cote, A. Melzer, C. Willingham, O. Weidmann. *Hotel:* Plaza.

U. S. BOTTLERS MACHINERY CO. *Booth 1100.* Exhibit of Model DS-12 Sanitair automatic air cleaner; also new container feeder. *Personnel:* I. H. Risser, C. R. Otters, A. G. Hornney,

Hobbs Controlled Tension Winding Means "More For Your Money"

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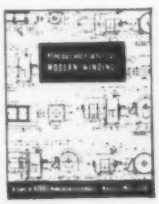
The finest names in a variety of industries have proved for themselves that the Hobbs concept of making a specific design of winding machinery to fit each different application means "more for your money". They have proved it with increased winding efficiency, lower maintenance cost and more accurate tension control (resulting in better quality of product).

Hobbs will provide a single winding or unwinding device, a simple or complex winding stand, or a complete in-process winding or unwinding installation — all with the direct objective of doing the job you want done at the lowest possible cost.

Remember, Hobbs are winding *specialists* — winding is our business. The full story is yours in our "Principles of Modern Winding". Ask for a copy now!



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Fully automatic, the great Elgin-Wrap is built to be a steady, swift and easily maintained producer! Designed to handle heat-sealing materials, it can also be equipped with photo-electric registration controls for printed wrappers. And the Elgin-Wrap is unequalled in its price field for speed.

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D. Landreth, W. King, L. L. Keeler. *Hotel:* Essex House.

VERTROD CORP. *Booth 700.* Display of hand, foot-pedal, pneumatic and electro-magnetic powered impulse sealers and trim sealers; new high-speed trim sealers with scrap blow-off devices; drum-liner sealers; also special large sealers which can make seals up to 72 in. long in 2- to 10-mil thicknesses of polyethylene. *Personnel:* A. Fener, S. Fener, L. Gross, N. Langer. *Hotel:* Essex House.

WALTON LABORATORIES, INC. *Booth 1101.* Exhibit of moisture-conditioning equipment and systems for humidification in a large space or small laboratory; web wetters for stabilizing internal moisture of paper, polyethylene and other fibrous materials. *Personnel:* J. Feldermann, B. Lewis, G. Lyons, A. Janks, F. Hartwell.

WARNER ELECTRIC BRAKE & CLUTCH CO. *Booth 701.* Display of new spline-drive armature design for clutch-coupling and brake applications, providing automatic compensation for magnet and armature wear and maintaining proper air gap when unit is disengaged; new Electro-Sheave, a packaged electric-clutch and sheave assembly for direct installation on all standard NEMA electric-motor shafts; demonstrator showing use of electric motion control in ultra-high-speed operations.

WEBER, H. G., & CO. *Booth 208.* Exhibit of newly designed flying splice unwind roll stand; Model DPS-41 differential-pressure web-edge sensing unit, with self-contained air-compressor unit; Model DPS-42 differential-pressure web edge for sensing two webs at a time. *Personnel:* H. H. Weber, R. L. Beninger, C. W. Bartlett, W. E. Karr, F. Lubeley, D. Ludwig. *Hotel:* St. Moritz.

WOLVERINE PAPER CONVERTING MACHINERY CORP. *Booth 100. Personnel:* H. Nagel, A. Dudas, M. Diehl. *Hotel:* Henry Hudson.

WOODMAN CO., INC. *Booth 310.* Display of Fleet-Weigh Model DS feeding and weighing system; Air-Weigh-Pac sloping tube-bag former/filler which slides product into bag; rotary Pak-Off for case-up operation. *Personnel:* N. W. Heyward, A. H. Forsyth, J. B. Herrick, R. V. Young, P. H. Parker, G. L. Denham. *Hotel:* Statler-Hilton.

WRAP-ADE MACHINE CO., INC. *Booth 826.* Unit packagers, power crimpers and pneumatic sealer on display. *Personnel:* A. M. Powell, R. F. Freebody, P. Tomiak.

WRIGHT MACHINERY CO., Div. of Sperry Rand Corp. *Booth 211.* New advanced Bagmaster for forming, weighing, filling and sealing pillow-type bags using single- or double-walled stock, with new Hytronic weigher, which can handle potato chips at 50 packages per minute. *Hotel:* Manhattan.

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. . . in an infinite variety of sizes, shapes and colors—flexible or rigid—open end or closed—plain or multi-color printed.

INSTANTLY AVAILABLE FROM OUR EXTENSIVE STOCKS OR QUICKLY EXTRUDED TO YOUR UNIQUE REQUIREMENTS

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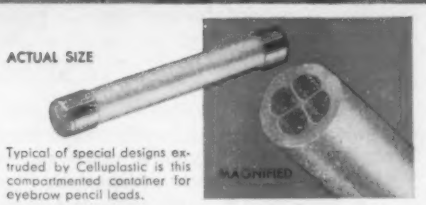
ACTUAL SIZE



Typical of special designs extruded by Celluplastic is this compartmented container for eyebrow pencil leads.

CELLUPLASTIC CORPORATION
24 Commerce St.,
Newark 2, New Jersey Dept. 549

Gentlemen:

I'm interested in your extruded plastic packages.

- ☐ Quote on enclosed sample. Quantity.....
- ☐ Quote on attached design. Quantity.....
- ☐ Have a technical representative call.

Name.....Title.....

Company.....

Address.....

for clear, skin-tight packaging of

PRODUCE

(and a variety of products)

new shrinkable, oriented

REYNOLON®

PVC FILM

New Reynolon oriented PVC film offers an ideal solution to better, less costly packaging of many food items—fruits, vegetables, meats, poultry, cheese plus a wide variety of other items such as window shades, stationery supplies, paper products and others.

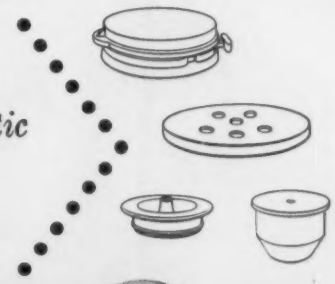
In addition to economy this new Reynolon film also offers you these advantages: It is crystal clear. It is shrinkable—provides a skin-tight package. It has high tensile strength, offers low temperature flexibility, has good shelf life. It is printable and sealable by heat or by adhesives. It can be metalized. It is easily laminated to paper, chipboard and other materials.

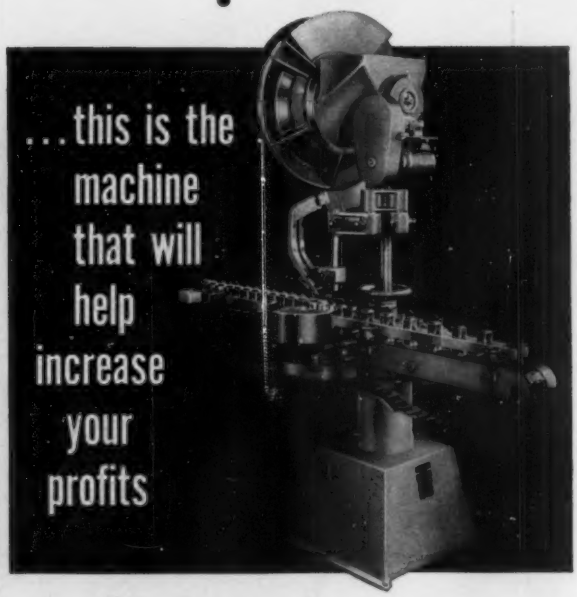
For details and technical assistance on Reynolon films, contact the Reynolon Plastic Specialist in the Reynolds office in New York, Camden, Detroit, Chicago, St. Louis or Los Angeles. Or write *Plastics Division, Reynolds Metals Company, P.O. Box 2346-RM, Richmond 18, Virginia.*

REYNOLON PLASTIC FILM

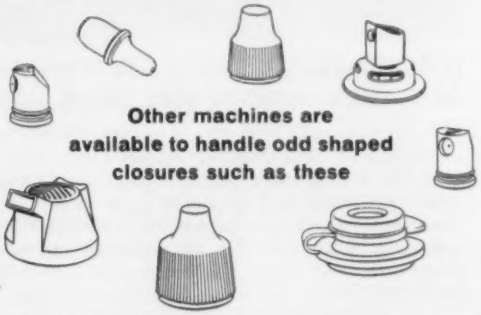
PLASTICS DIVISION
REYNOLDS METALS COMPANY

If you are using plastic fitments like these





IT'S the Consolidated H-O-F Capper, and you can use it for applying odd as well as conventional shapes of *aerosol* caps. You'll get automatic sorting, too. And you'll find this machine fits into any *aerosol* filling line. Speeds from 60 to 250 caps per minute with ready changeover from one size container to another. Write for complete details.

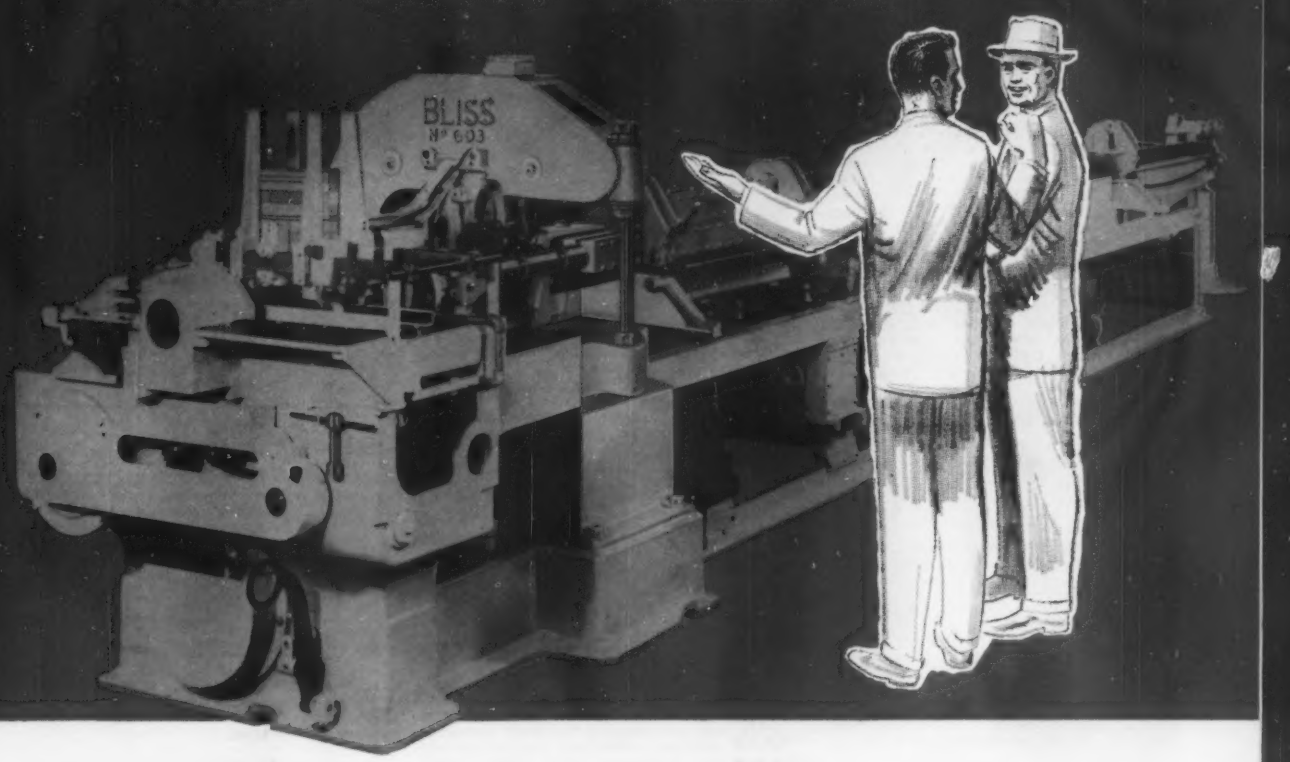


Other machines are available to handle odd shaped closures such as these

Consult our packaging specialists for complete information about the H-O-F Capper, as well as other Consolidated machines, for the drug and cosmetic fields.

CONSOLIDATED PACKAGING MACHINERY CORP.
1400 WEST AVE., BUFFALO 13, N. Y.

ANNOUNCING the BLISS 603 BODYMAKER



It makes a range of sizes that previously required 2 or 3 machines

Whatever size or sizes of can you use, chances are it can be made on Bliss' new No. 603 "Universal" bodymaker, the most versatile bodymaker yet designed.

The Model 603 Bodymaker manufactures cans up to 6 3-16" diameter and 5 9-16" high. With modifications in the feed bar stroke and work station housings involving standard change parts, it will produce cans up to 7 13-16" in height.

No other bodymaker made can handle that range of sizes; one plant wanting to make all those sizes would have to have either 2 or 3 bodymakers to do the job.

It has been designed for continuous high speed operation at maximum production rates of 400-500 can bodies a minute on smaller size cans. Open arch construction, with one side open, provides access to forming parts for adjustment and quick changeover to a different size can.

Why not take a long thoughtful look at the new 603 and other related equipment in the Bliss high speed can line? We'll be glad to give you all the information you want—both on the products and on the economics of making your own cans. Drop us a line today or call your local representative.

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FOR SALE—METAL CORNER STAYER with metal edging. Reply Box 1153, Modern Packaging.

MACHINERY FOR SALE—Four-color, 33", Wolverine Hydro Printer. Continuous running ink rolls, flying splice, dynamic drive, chill rolls, automatic unwind tension control. Reply Box 1154, Modern Packaging.

MACHINERY FOR SALE—Six-color, 33", Modern Clipper Flexo Film Printer. Reliance drive, Maxim burner and oven control, automatic unwind and rewind tension controls, flying splice. 3 years old. Reply Box 1155, Modern Packaging.

Machinery Wanted

WANTED GOOD SECONDHAND three or four-color Printer to be used as tail-end printer on our bag machines. Must be equipped with 8-pitch gear and width of printer from 32" to 42". International Envelope Limited, 7000 Hochelaga St., Montreal 5, Que., Canada.

Materials Wanted

WANTED—BUTYRATE, KRALASTIC, cycolac, also styrene, acetate and other plastic scrap. Claude P. Bamburger, Inc., Ridgefield Park, N.J., HUbbard 9-5330.

Help Wanted

PACKAGING LABORATORY ASSISTANT—Assistant Designer corrugated packaging. Creative flare. Experience preferred. Outstanding packaging lab. Top rated company. Excellent opportunity for right man. New York State. Replies held confidential. Address: President, Box 1147, Modern Packaging.

DESIGNER, AGE 25-35—Some college preferred, experience in packaging equipment design such as found in textile, food and meat industries. Some travel, good starting salary, incentive plan. Reply in strict confidence to Box 233, Simpsonville, South Carolina.

CHEMIST—FLEXOGRAPHIC INKS—Assist Flexo Dept. Head. Formulation experience required. Excellent opportunity in growing company. Salary open. Submit resume. Claremont Pigment Dispersion Corp., 39 Powerhouse Rd., Roslyn Heights, L.I., New York.

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Positions filled and secured. A confidential Nationwide Service for employers seeking personnel and individuals seeking new positions. Inquiries invited. Reply to Graphic Arts Employment Service. Est. 1952. Helen M. Winters, Manager: Dept. PAC-11, 307 East 4th Street, Cincinnati 2, Ohio. Phone CHerry 1-2202.

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MANUFACTURERS REPRESENTATIVE — Covering Carolinas and Virginia, desires package machinery and packaging lines. Many years experience packaging field. Will be at PMMI Show. Reply Box 1151, Modern Packaging.

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A-53

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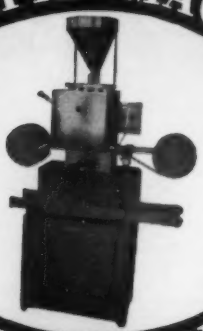

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Package Data for A & P Muffin Tray:

Produced by Berles Carton Co., Paterson, N. J. on four color offset press after wax laminating with greaseproof paper and sheeting. .016 Crossett Bleached Board was selected for its levelness after laminating, fidelity of color in process printing and freedom from mottle in solid areas

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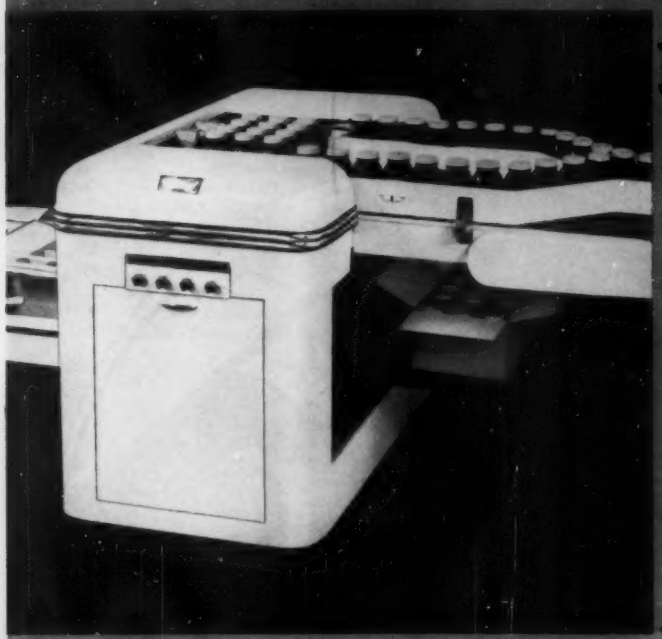

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Miller Hydro Co.,
Bainbridge, Ga.

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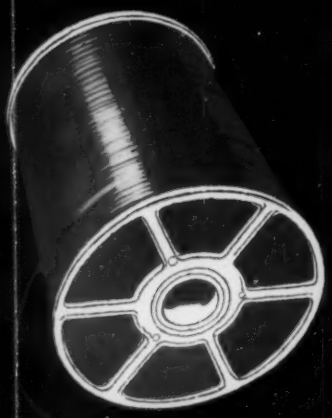

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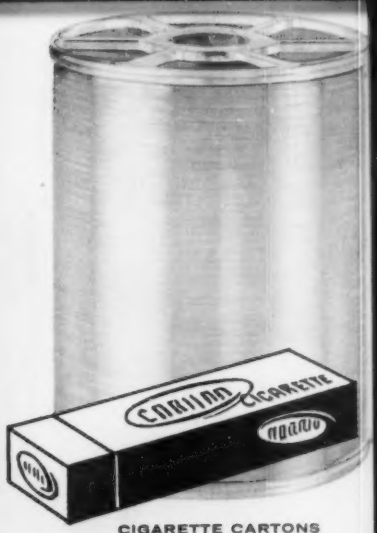
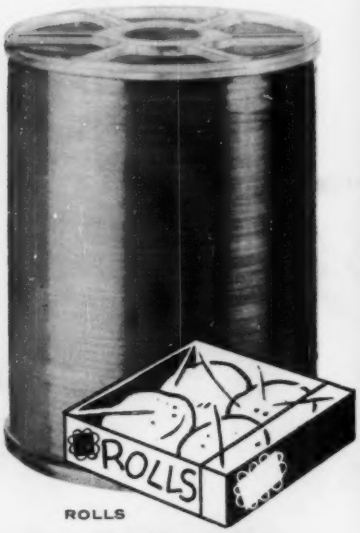
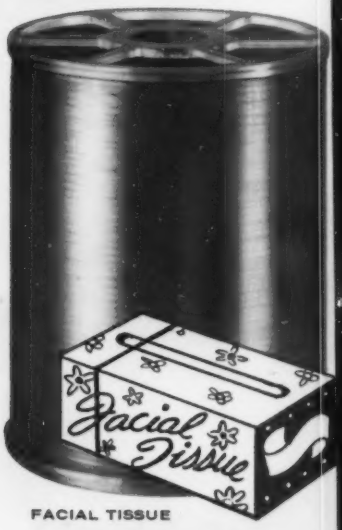


CIGARETTE CARTONS



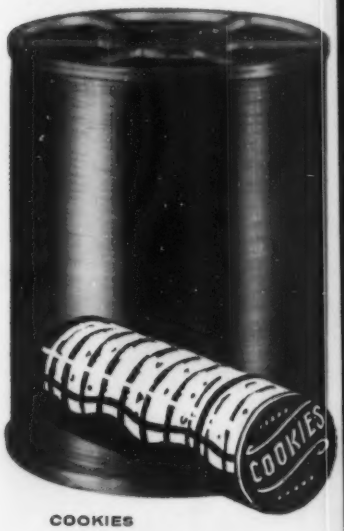
ROLLS



FACIAL TISSUE

MARGARINE

TOBACCO



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